NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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NOURSE, EATON & TOLMAN, PROPRIETORS.
OFFICE....100 WASHINGTON STREET.

SIMON BROWN EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

THOUGHTS ABOUT THE MONTH OF MAY.

MAY, among the old heathen Romans, was sacred to their god Apollo, who, according to their belief, presided over music, poetry, and the fine arts generally; and it is said that with them almost every day in the month was a festival. The custom which has descended to our own times, of observing the first day of the month, or May-day, with festive and floral rites, or at least by wandering over hills and dales in search of flowers, is supposed to have been derived from an equally ancient Roman festival in honor of Flora, another of their gods, who had the especial charge of flowers and gardens. This holiday season lasted four days, from the 28th of April to the first of May.

In the warmer climates of Greece and Rome, the nurseries of our poetry and literature as well as of our arts and sciences, May is probably entitled to all the praises which have been lavished upon it by poets, and by their imitators in our own country, however inapplicable much of their poetical descriptions are to the season of May day with us.

In those countries, at the commencement of this month, we are told that the temperature of the air, the pure-blue of the sky, the soft green of the leaves, the thousand delicate tints of the flowers scattered so profusely over hill and valley, with the perfume which they exhale, and the music poured from every grove—all unite to fill every sense with enjoyment. In such latitudes, the "ethereal mildness" and "balmy sweets" which breathe in song may be a literal transcript of the impressions of a May day on their inhabitants.

But with us, the first of May is too early for the out-door amusement of a holiday, especially by females, and those of sedentary habits. The earth is still too damp, the air too chill for health or comfort, and, besides, the charms of nature are not developed. Though scarcely a flower of the humblest rank can be found during a day's ramble, the youth of our land seem determined to perpetuate the observance of a festival which belongs to a more southern clime. Occasionally, indeed, the first of May is sufficiently warm, dry and comfortable for out-door exercise and amusement, but often the weather is quite unfavorable. Storms of rain and sleet, sometimes of snow even, are common, especially in the more elevated portions of New England, during the first week in May. So that, in our climate, the young people who decide on a May-day ramble, must be uncertain up to the very time of sallying forth at "peep of day," whether to dress themselves for the heat of summer, or for the chill of Winter,—for a soft southern wind, or for a piercing northeaster. And how often has a sore throat or a hoarse cough the next day reminded a fond mother that she was wrong in permitting her daughter to "go Maying" so thinly clad and in so cold a wind.

We fear that the life of many a youth is yearly sacrificed to the celebration of this holiday in New England. In England, where the season of spring is several degrees warmer than with us, the observance of May-day seems to be falling into disuse, although it was in old times one of the favorite holidays of the people. Milton, Shakspeare, and most of the old poets, have spoken of its festivities. Old Chaucer says that on May morning,

> "Forth goeth all the Court, both moste and leste,
> To fetche the floures, and braunch and bloma."

Probably, the change consequent on the adoption of the New Style, by which the month commences about a dozen days earlier than it did in the times of those "good, old English gentlemen," is one reason why its observance is becoming unpopular. In her "Calendar of the Seasons," Mary Howitt says, "May-day, though still observed as a rural festival, has often little pleasure to bestow, except that arising from the name." In another later English publication, a writer, referring to the section of country in which he resides, says: "The May-day ceremonial has died out among us." These festivities he regards as belonging rather to the relationship of the feudal baron and his tenants, than to our own times, and rejoices that the benevolence of the English land-holders which once encouraged the observance of May-day, is as active now as ever, though directed to other and more worthy ones. "The school festival or pic-nic, the plowing-match and the horticultural show," says he, "have driven out Maypoles and Christmas misrule."

If this festival is to be perpetuated in New England, its observance ought to be transferred to the latter part of the month, when the earth is covered with a garb of richest green, and when our orchards present

"One boundless blush, one white empurpled shower
Of mingled blossoms,"

and when one feels, as he walks in field or forest, like ejaculating with Wordsworth,

"And 'tis my faith that every flower
Enjoys the air it breathes."

But then this period is in the midst of the planting season, and the farmers of New England are so busy that we dare not recommend a change that would appropriate one of these busy days to a public celebration. May-day must, therefore, be postponed to the fourth of July.

For the New England Farmer.

SQUASHES VERSUS PUMPKINS.

MESSRS. EDITORS:—Crude notions exist regarding the above vegetables, which are constantly reiterated in many of our agricultural papers. They are classed indiscriminately as belonging to the same genus of plants, when, in fact, they are perfectly distinct. I am induced at this time to forward you a few words on this subject, from meeting in the *Working Farmer* of the last month, an article on the Autumnal Marrow, (known in New York) as the "Boston Marrow," as a true squash. Now this vegetable, together with the Valparaiso, Hubbard, Polk, Acorn and Custard, are as truly pumpkins, as the Connecticut field and Hard Shell pumpkins, and will all hybridize or mix, while the Winter Crook-neck, (which I take to be the true type of squashes,) will not hybridize with the pumpkin. If it was inclined to this, it would have lost its normal form and disappeared long since. Nature, as well as observation, teaches us regarding species, but many confound the term species with varieties, hence some suppose that our Canada goose can be crossed, year after year, with our domestic goose, but this cannot be done after the first crossing, any more than the Jack and horse, which stops at the mule. In the paper alluded to as above, the writer cautions cultivators to be careful to sow melons, cucumbers, &c., away from pumpkins and squashes, as "they will hybridize." I have never as yet known the crook-neck to hybridize with the pumpkin, melons, cucumbers, &c., although planted side by side.

Yours truly, J. M. IVES.

Salem, March, 1862.

For the New England Farmer.

HOW SEEDS GERMINATE.

A seed, when ripe, possesses a large share of carbon. This is necessary to its preservation, but is an impediment to its development as a new plant.

To rid itself of this principle it must convert the carbon into carbonic acid; for this purpose, oxygen is necessary, which it cannot readily obtain from the atmosphere in its dry state, but by burying it in the soil it takes the requisite supply of oxygen from the water, which it absorbs, fixing hydrogen (the other element of water) in its tissue, and thus it is enabled to form carbonic acid, which it throws off by its respiratory organs until the proportion of carbon is lowered to the amount best suited to the growth of the plant. The water also causes an expansion of the parts, many soluble parts become fluid, and thus sap is formed and a circulation is established, which keeps up a communication between the remote parts of the plant.

Heat aids in causing the vital principle to act, expands the air in the microscopic cavities of the seed, and produces a distention of all the organic parts, which thus have their irritability excited, never again to be destroyed except with death.

Germination being established, the parts enlarge, and new parts are formed from a mucilaginous saccharine secretion which the germinating seed has the power of forming.

From this the root, or radicle, is formed, and goes downward in search of food, the stem or plumule rears itself in the air and unfolds the seed leaves or cotyledons, which, when exposed to the light, decompose carbonic acid, fix the carbon, become green, and form the matter by which all the pre-existing parts are solidified.

And thus a plant is born into the world.

E. W. B.

VERMONT STATE AGRICULTURAL SOCIETY.—The officers of this Society for the year 1862 are:

President—H. HENRY BAXTER, Rutland; Vice Presidents—Edwin Hammond, Middlebury, J. W. Colburn, Springfield, Henry Keyes, Newbury, John Jackson, Brandon; Recording and Corresponding Secretary—Daniel Needham, Hartford; Treasurer—J. W. Colburn, Springfield; Directors—Frederick Holbrook, Brattleboro', E. B. Chase, Lyndon; H. S. Morse, Shelburne, D. R. Potter, St. Albans, Henry G. Root, Bennington, David Hill, Bridport, John Gregory, Northfield, Elijah Cleaveland, Coventry, Nathan Cushing, Woodstock, George Campbell, Westminster.

For the New England Farmer.

HINTS ON BUYING FARMS.

One of the most difficult operations that the young farmer has to encounter, when first setting out in the world, is the selection and purchase of a farm. Unlike buying a horse or cow, which can be disposed of again at a slight sacrifice, if they do not suit, the farm cannot be sold every day, if it be a poor one, even at a sacrifice. It is necessary, therefore, to be very cautious in getting a farm which is probably destined to be your home for life.

In the first place, no man should buy a farm unless he is resolved to live on it all his days, and having made that resolution, let him look for one that he can be contented on, or he had best not buy at all, for a discontented farmer is a pitiable object.

The location of a farm must be noted, as there is a great difference in the products of different farms of like fertility, but differently situated. A farm sloping to the south, or east, should be preferred to one descending to the north, or west, for several seasons, viz: the land is warmer, and the crops start quicker in the spring, and mature earlier in the fall, thereby escaping early frosts. The land is generally dryer, and does not need as much underdraining, and is not as liable to heave, as land sloping to the north. A southern slope is better for fruit trees and vines, as they are not so much exposed to the bleak north winds in winter and early spring, which prove so destructive to fruit trees in New England and eastern New York.

The next great object sought should be good water, and plenty of it. A farm with plenty of springs and running streams, is worth from one-fourth to one-third more than one on which the water has all to be drawn from a well. Luckily, most New England farms have running water, which accounts for the great superiority of their stock over that in sections that are poorly watered. Stock of any kind thrive a great deal better when they have an unlimited supply of pure water, than when their drink is drawn from a well by a negligent man; and they sometimes get not more than half enough, or they have to drink at some muddy pond of standing water.

Another very important consideration is, the buildings; and in looking for a farm, always bear in mind that good buildings can be bought a great deal cheaper than they can be built; or, in other words, the difference in the cost of a farm without buildings, and one with them, is not, as a general thing, one-half enough to put on the buildings. The young man just starting in the world, unless he have rich relations who are willing to assist him, cannot afford to buy a farm and then go to building, so he must needs live in the old house, and use the old dilapidated out-buildings, for a great many years. So he lives on, suffering a great many inconveniences, and subjecting his cattle to exposure, and sometimes his family, also, for the want of comfortable shelter, and perhaps expending money enough in patching up his old buildings every year to pay the interest on the cost of new ones. The want of fences is another serious drawback on a farm, especially where lumber is as expensive as it is in most of the thickly settled districts of New England and New York.

In choosing a farm, always look for a good wood lot, so that the fire can be kept going and the fences in repair; and if you have an occasional load of wood to sell your neighbor who has no wood lot, the proceeds will help pay the interest money.

In selecting a farm, be sure not to buy poor land. It is better to buy good land, with poor or no buildings, than to buy poor land with good buildings; for on the good land you can soon make the buildings, but on the poor land you can not make the interest.

There is prevalent among farmers an erroneous idea in regard to the price and relative property of farms. For instance,—we will suppose two farms for sale; one at $40 per acre and the other at $80 per acre, and we will suppose that the one at $40 will produce 35 bushels of corn to the acre. Now one-half of the farmers would say, the farm costing $80 per acre, should produce 70 bushels of corn to be as cheap as the $40 farm. But this is a great error. We will take the figures of one of your contributors some years ago, which made the cost of raising an acre of corn at $26, if I remember right, (but which I think is too high,) and see what we make on an acre of corn which produces 35 bushels. Call the corn worth 75 cents per bushel, and 35 bushels will come to $26,25, from which deduct $26,—which includes interest, taxes and all expenses,—and we have just 25 cents profit, rather a small payment towards our $40. Now we will suppose the other farm to yield 50 bushels per acre, which, at 75 cents, will be $37,50, from which deduct $26, and $2,80 interest on the extra $40, and we have $8,70 profit to pay towards the principal; so it is evident that the $80 farm is cheapest, for $8,70 per year will pay $80 sooner than 25 cents will $40. In buying a farm, we should see that there is not much waste land, as that has to be paid for as well as the good, but brings in nothing. What I mean by waste land is, ledges and places that do not produce anything. Swales, and swamps, even, if not too extensive, are by no means waste, as the former produce a great deal of feed, and the latter can be drained, and their contents are of great worth as manure, on uplands. Many other things are very desirable, but not of so much importance as the foregoing,—such as the location of the buildings, which should be as near the centre as possible, and be near the water. A farm with different kinds of soil is to be preferred to one with the soil all alike, as that renders the raising of variety of crops difficult and unprofitable. In selecting, reference must be had, also, to the branch of farming which it is wished to engage in; if the dairy, then select a grass farm, and if raising grain, a farm adapted to that, and so on for other branches. In conclusion, I would say, buy a good farm, put on good stock, use good tools, and take good care of them, and you will make a good, honest living, and soon have your farm paid for; after which you can take the world a little more easy, letting your children work the farm while you store your mind with the riches of good books and agricultural papers.

AGRICULTURIST.

Oak Hill, N. Y., January, 1862.

GEOLOGY OF MAINE.—A geological and natural history survey of Maine was commenced, last season, by Prof. Hitchcock and Dr. Holmes. They first explored the western border and coast to get

a base line of operations; then, with three scientific assistants and seven boatmen and guides, canoes, batteaux, camp-equipage, instruments and stores, they started up the Penobscot River for the wilderness. They followed the river and its branch to its head waters, and through the lakes across the portages into the St. John waters; meantime dividing into several parties, and returning by different routes. Their reports, which are now being printed, show the discovery of statuary marble, equal to the Italian; immense beds of marl, some of which contain phosphate of lime, so valuable as a manure; indications of tin, copper, etc. Indeed, native copper has been found in the town of Carrol, Penobscot county, where they suggested its probable existence. The State appropriation for this survey was only $3000.

For the New England Farmer.

CONCENTRATED MANURES---WILL THEY PAY?

Among all the certificates and reported experiments with concentrated manures that have fallen under my observation, I have yet seen none that showed the first thing that a practical farmer wants to know, viz., Will it pay? All agree that guano, Mapes' and Coe's phosphate, poudrette, and many other kinds that might be named, make vegetation grow rapidly and produce large crops, but if those crops cost more than they are worth, no one that farms it for profit, or a living, can prudently invest in that kind of fertilizer. For the dollar invested in any concentrated fertilizer in the spring, should, at least, pay back 100 cents in the fall, in crops, or the investment had better not have been made. This is presuming that it is all exhausted the first season, which is the fact, judging from what experience and observation I have had.

I propose now to give the result of an experiment on a small scale with Coe's superphosphate. My experiment was on a piece of corn. The land was planted the year before, and produced a fair average crop for light pasture lands; I should judge about 35 bushels per acre. Last spring I spread and plowed in shallow manure enough, as I judge, to make the piece good for 40 or 45 bushels per acre; planted the 18th day of May, putting a large tablespoonful of Coe's superphosphate in each hill, with the exception of four rows through a level part of the piece, where I could see no advantage on either side. The frost injured my corn the year before, and although I saved the best I had, and thought it good, I found my mistake, for it being cold, wet weather, not more than two-thirds of it came up, which was an essential drawback on my crop. I put the phosphate in the hill, mixed and covered it with the soil, and the corn came just the same with it, as without it; at least I could see no difference. Where I put the phosphate, the corn grew much the best in the first of the season; at the first hoeing I judged there was near three times the heft of stalks, but after that the weather grew warmer, and the difference gradually diminished. At the first hoeing I put another spoonful of phosphate to each hill, except four rows on one side of the four unphosphated rows. I watched the growth and progress with much interest through the season, and could plainly see that the unphosphated was gradually gaining on the other, and at harvest time, was satisfied that the unphosphated had about the same corn as that once phosphated, but rather less stalk, and that either of them had less corn, and some but little less stalk, than the four rows that were twice phosphated. But to be sure, and exact, I harvested and kept all separate, dried thoroughly, shelled and weighed carefully, all the corn that would dry sound, making but one sort. I will here state that I weighed the phosphate put on to the eight rows, charged it at cost in the field, and charged a fair price for the time or extra labor of planting and hoeing, of which I kept a strict account, and the result was as follows:

None, 108 lbs., 5 ounces.

Once, 110 lbs., 12 oz.—gain, 2 lbs., 7 oz.; extra cost, 31½ cts.; extra corn cost about $7 per bushel.

Twice, 140 lbs., 14 oz.—gain, 32 lbs., 9 oz.; extra cost, 49 cts.; extra corn cost about 84 cts. per bushel.

I am rather surprised at the result of my experiment. That ten pounds put in the hill at planting, should make no corn, or only 2¼ pounds, and that ten pounds put in at planting, and 6¼ at first hoeing, should make 32½, is a difference that I cannot account for under the circumstances, the manure being plowed in, and, as I supposed, would carry the corn out through the last of the season. If there had been no other manure, I should have expected the phosphate to have been exhausted, and left the corn starving just at the time it had got out a large growth of stalk and needed it most. But I am satisfied that to put phosphate in the hill at planting, is money thrown away, unless there is more put on at some later period to carry through the earing and filling out of the corn.

In conclusion, I will say that I am well satisfied for the pains I have taken in experimenting thus far, and intend to try it again next season, and hope that many others will do the same, not only with Coe's phosphate, but with all other kinds of concentrated fertilizers, and give the result of their experiments to the public through the medium of the *N. E. Farmer*.

THOMAS ELLIS.

Rochester, Mass., 1862.

MOSS ON ROOFS.

There is a barn near our farm with a shingle roof fifty years old, and the shingles appear quite as bright, and in as good order, as most shingle roofs at the end of the first year. When built, it was coated with a lime wash tinted with ochre, and fully charged with glue and salt. This formed an agreeable color, and lasted many years; the lime present entirely preventing the growth of moss, and also the development of acetic acid from any sappy portion of the shingles. About twenty years since, it was again re-coated, with the lime wash tinted with amber. This is now pretty generally removed, still leaving an even color to the roof, and to the shingles a surprising freshness of appearance.

We suppose that lime alone put on as a whitewash, would have answered all these purposes, though not so agreeably to the eye, while the wash tinted to resemble the color of the shingle, can never be unsightly.—*Working Farmer.*

For the New England Farmer.

"WILL UNDERDRAINING PAY?"

DEAR SIR:—The question has been repeatedly asked in your paper, "Will underdraining pay?" and as often answered in the affirmative. Yet there is some doubt in my mind about its being a paying operation in all places. For one lot of land, in a certain locality, it may pay well to drain, while with another, equally good, but in a different locality, it would be a losing operation. Or, with the men of capital, it might pay well in the end, while with the farmer, having no resources but the income of his farm, it would be of doubtful propriety. Is, or is not such the fact?

I have a lot of land containing ten acres, which, I doubt not, would be greatly improved by drainage, as it is nearly all too wet for cultivation. About one-half of the lot was formerly a wet, miry swamp, the mud gradually increasing in depth from the outside to the centre, where no bottom has ever been found. It has been partially drained, the old grass roots have decayed, and the surface rendered very easy of cultivation. The remainder of the lot consists of a wide strip on three sides of the swamp, of moist, loamy land. The surface is a black, rich-looking mould. The subsoil, in the dryer parts, is a deep brown-colored loam. This rests upon a hardpan bottom. In the wetter portion it is a fine, slate-colored, clayey substance. This land is located where farms, as they average, are worth $20 per acre, and hay from $12 to $15 per ton. Now, taking into consideration the value of the land and its quality, as described, the worth of hay, the expense of tile and their transportation here, (being twelve miles from any depot,) will it pay to underdrain such land in this locality? Or would you advise filling the ditches in the hard pan with small stones?

How would strips of hemlock board nailed together, answer? Would they be durable and less likely to become clogged than stones? What would be the expense of tile? How long are the pieces, and what is their weight, and where can they be obtained?

One question further. Would it be a safe operation for a man without means to drain and reclaim this land I have described, and depend upon its production for his pay? H. T.

Rutland, Mass., Feb. 4, 1862.

REMARKS.—It seems to us that our correspondent can work out the problem for himself without our help. It appears that the "wide strip on three sides of the swamp" produces nothing now. Suppose he reclaims one acre

At a cost of		$30,00
Manure		10,00
Grass seed		2,00
		$42,00
On such land, he cannot fail to get, the first year, 1 ton of hay, worth, after the cost of making	$12,00	
The second year, 1¼ tons	18,00	$30 00
		$12,00

At the end of the second year, instead of an offensive, unproductive swamp, he has land worth $100 per acre for agricultural purposes, which has cost him only $12 per acre, and with proper care will continue at that value through generations to come. Is it, then, worth draining?

If there is hard pan underneath, and the upper portion is muck, it would be quite likely to wash down and obstruct the flow of water if it were constructed with stones. Stones will answer a good purpose for many years in a gravelly or sandy loam. Simple, open ditches may, possibly, answer the purpose for a time—but they should be dug where the tiles are to be placed, so as to prevent digging again when tiles are to be laid. The cost of tile at the factory is about $14 a thousand. They are in pieces, each 12 inches long. If hemlock boards could be kept always wet, they would last for a long time; but where changing from wet to dry, and dry to wet, they would soon rot out. Mr. George Campbell, of West Westminster, Vt., says hemlock bark "is as durable as tile, and not half as expensive."

For the New England Farmer.

HUNGARIAN GRASS, OR GRAIN.

MR. EDITOR:—Considerable has been said, for three or four years past, about Hungarian grass; some against its usefulness, but more in its favor. I have cultivated several acres each year, for four years, and having met with uniform success, am now prepared to say I entertain the same sentiments concerning it that I did in 1859, and again in 1860, which were published in your paper.

I continue to cultivate it on account of the uniform and abundant yield of both hay and grain. Of hay, about as much as I could get of any other kind upon the same land, (according to quality, from 1½ to 4 tons per acre,) and of uniform good quality, when I have good weather to cure it. Of grain, from 15 to 25 bushels, weighing from 44 to 48 pounds per bushel, which is received with as great avidity as corn and oats, by all the domestic animals I have around me.

I harvest it as soon as the seed is mostly ripe. At the time of cutting, it requires very much more drying than herds grass does when cut in bloom. With me, I can say horses and cattle are as ready for this hay when well cured, as they are for other good hay. By cultivating this, I have a double crop, either of which is very satisfactory.

Several reasons exist in my mind why this grass has not been more readily adopted by farmers. Many have tried it on a small scale, having sowed a pint, a quart, or even four quarts of seed, as an experiment, and put the result of the harvest into the barn, to receive their attention when they might find it convenient. After awhile they find the seed mostly eaten up by a privileged set of pilferers, ever ready to take their rations in the sheaf, when the farmer is willing to be saved the trouble of threshing in season, and going to mill. This farmer, of course, thinks the result of the experiment not very good. My plan and practice is a different one. I thresh it with a machine as soon as I bring it to the barn, and then carefully season or dry the seed before I put it in the bin.

Some have read in accredited agricultural papers, got up expressly to advance the science of

agriculture, that it is "a coarse, dry, and almost worthless stalk;" "a great exhauster of the soil," &c.; "horses and cattle out West have died from eating it," &c. The word coarse is enough to discourage some. I have never got any too coarse for my cows, and even the calves eat up all the butts greedily. "Great exhauster of the soil." I love to have the soil on my farm exhausted, by getting three and four tons of the richest fodder from an acre. It gives me good hope and firm belief that it will never show exhaustion, if I but feed that acre with the refuse of what was taken from it. "Beasts have died from eating it," is only a story of the man too indolent rightly to apply the best gifts of God for his own benefit, Beasts have been killed outright from eating corn, here in Massachusetts! Yet no paper echoes the fact. To do so would not make one hair white or black, since we all know that such things are brought about by mal-administration.

Some, to whom I have sold seed, with directions not to sow it till the ground is warm, (near the first of June here in New England,) have sowed it in March and April on the cold sod. The result is immediate decay in the soil, or a dwarf existence, which is even worse. From such practice I have often been falsely accused of selling poor seed.

I am prepared fully to testify to the good qualities of Hungarian grass in all its forms, not because I wish to sell seed, as my stock of that is nearly disposed of, but that I would like to have farmers more generally help themselves to every prominent good thing. WM. RICHARDS.

Richmond, Mass., March 15, 1862.

EXTRACTS AND REPLIES.

MUCK AND CORN FODDER.

I have a large quantity of meadow muck, and wish to use as much as will pay. How much can I add, with profit, to my manure that is made from fourteen cattle, when drawn from the cellar? The muck was thrown out last season, and drawn from the meadow this winter. Would it be advisable to spread and plow in some without being mixed, where I intend to plant? Is it of much service without manure mixed with it?

Much has been said in regard to sowing corn for fodder; I will add my testimony in its favor. Last spring I planted in rows about three-fourths of an acre; the rows 7½ feet apart—in the rows very thick—and hoed it well; the corn was white flat, and grew finely. I used what was needful green; the rest was cut and spread on the ground before the frost came. I let it lay one day, then tied in small bundles and took to the barn, and hung on poles over the floor. I managed to hang two deep in that way, and it cured well, and my cattle will eat it in preference to the best hay. My advice to all who have land that produces but little grass is, to try it. CHARLES C. GRANT.

Auburn, N. H., 1862.

REMARKS.—On a sandy loam land, an ox-cart load of muck may be spread to every square rod, with advantage to the land, if the muck is of good quality, and has been thrown out to the light and air eight or ten months.

You may add one load of such muck to every two loads of manure, profitably—but it should be added gradually, as the manure is thrown into the cellar. If it has not been mixed through the winter, apply it directly to the land, and plow it in.

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RAISING CALVES.

My method of raising calves agrees in the main with that of Mr. Bassett, as given in the *Farmer* for March 1. In some particulars, however, it differs, and, quite naturally, I think it differs for the better. In common with many other farmers in this vicinity, I begin to give the calf hay tea as soon as he has well learned to drink. This tea is made by pouring boiling water on clover or herds grass, and letting it steep without more boiling. It is very nutritious, digests easily, and in a short time the calf comes to like it quite as well as milk, if not better. I begin to give them about a pint a day mixed with their milk, and as they grow older the proportion of tea to milk is increased.

It seems to me injudicious to feed whole oats to a calf six weeks old. He cannot chew them sufficiently to make them digestible, and it will be found on examination that they pass through him nearly or quite unchanged. I never give oats to a calf till he has done with milk, nor do I overfeed with oat meal or corn meal, unless it be first cooked. Oat meal is preferable to corn; corn meal is too heavy food for calves, except in very small quantities. WM. W. FROST.

Coventry, Vt., March 4, 1862.

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ST. JOHN'S WORT.

The Patent Office folks seem to be laboring under a mistake when they say that "*Hypericum corymbosum* is but little known throughout the country."

On the contrary, *it is* generally known. I copy from two reliable works.

Gray says, "in damp places common."

"In wet meadows and damp woods, New England to Arkansas."—*Wood.*

Does not *Darlington* refer to *H. perforatum*? "A hardy plant, prevailing in pastures and dry soils in Canada and the United States, much to the annoyance of farmers."—*Wood.*

"Pastures and meadows. Introduced from Europe, but thoroughly naturalized, and too well known everywhere as a pernicious weed, which it is almost impossible to extirpate."—*Gray.*

Those Patent Office people are great blunderers. N.

Georgetown, Mass.

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EXACT STATEMENTS WANTED.

I notice that several of your correspondents, in stating their experiments, do not make them exactly right according to my notion; that is, in putting on different kinds of manure. Some would put on a certain quantity of one kind, and so many pounds or bushels of another, and so on, without stating the cost of each.

Now facts are what farmers want. If ten dollars' worth of one kind of manure or fertilizer will produce more value than ten dollars' worth of another kind, then it ought to be stated so in dollars and cents, so that it can be of practical use to the farmer. C. D. B.

Hatfield, 1862.

IS CLAY DUG FROM BENEATH THE SURFACE A FERTILIZER?

In digging a cellar, I threw out a quantity of stiff, hard clay, which was exposed to the air a few months before winter, and then was frozen and covered with snow. In the spring I set some cabbage and turnip plants in it, and they grew as well, looked as rank, and produced as much as if set in good rich soil; cucumbers, also, flourished exceedingly well. If this proves clay to be a fertilizer, those owning clay farms have an inexhaustible source of manure, and a great inducement to plow deep. J. H. M.

Westford, Vt., 1862.

REMARKS.—Clay is an important fertilizer, especially when it contains *magnesia*, *potash* and *lime*, which it sometimes does. From the investigations of Mr. Thompson and Professor Way, "On the Absorbent Power of Soils," it has been ascertained that a subsoil, abounding in clay, loam, or mould, has not only the power of arresting ammonia, but of absorbing and retaining "everything which can serve as a manure for plants." The common, yellow earth, on the banks of the roadside, is a fertilizer in a considerable degree and will sometimes bring fine crops.

—

PROFIT OF POULTRY.

Please publish the following account that I have kept with my hens the past year, from March 1, 1861 to March 1, 1862.

To 13 fowls	$7,67
To keeping	33,63
To the use of house and land	2,00
	$48,30
By 40 chickens sold	$14,60
By 2484 eggs	39,34
37 fowls on hand	20,00
11 chickens ⅔ grown	3,63
5 barrels of hen manure	6,25
	$83,82
Deduct the cost	48,30
Net profit	$35,52

Berlin, March, 1862. W. H. PAIGE.

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WEATHER IN VERMONT.

We have had, for a few days past, by far the nearest approach to a thaw of anything we have seen since old Sixty-One left us; and this can scarcely be called more than a "sign of a thaw;" it has, however, relieved most of the roofs of the snow that has been accumulating upon them for the last eight weeks; no small amount, I can assure you. The month of February was, with us, decidedly snowy. Snow fell on thirteen different days; the whole amount was 48.5 inches; the greatest fall in twenty-four hours was 13 inches, on the 19th; the greatest consecutive fall was 14.5 inches on the 19th and 20th. We have had but very little snow thus far this month.

I see by the last *Farmer* that "T. S. F.," of Felchville, has a cow that seems to be in a very bad way. Now to save him all further trouble with her, (and she must be exceedingly troublesome in a large dairy,) I propose that he shall send her up this way, and we will exchange with him, as we have plenty of cows around here that can safely be warranted never to give so great a quantity of milk as to trouble any reasonable man. But if this should not chance to meet the mind of the gentleman, a friend suggests that he feed plentifully on cob meal; if this does not cause her to "dry up," it may be considered a hopeless case.

Calais, Vt., March 13, 1862. JAKE B.

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CULTURE OF LEADING CROPS.

I have thought you might advance the interests of your readers by inviting, at this season of the year, a series of communications on the culture of some of our leading crops. The hay and corn crop have always been more or less written about, as well they should be—but we ought, as farmers, to pay more attention to the culture of the root crop. Allow me, then, to ask you to call for the experience of your readers in the culture of the beet and carrot for feeding purposes; also, of the turnip for same use. I mean short, pointed articles, as to kinds, manner of managing and mode of culture. Also, the experience of our vegetable farmers as to the best kind of *early* potatoes, and their manner of raising the same.

Fall River, Feb., 1862. ALEX. B. MACY.

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CURE FOR RINGBONE.

Will some of the readers of the *Farmer* inform me what will cure ringbone on a horse's foot?

March, 1862. YOUNG FARMER.

REMARKS.—Mr. W. H. Chaffee has communicated to the *Rural New-Yorker* the following: "Make a bag of strong linen cloth, about two inches broad, and eight inches long; fill it with copperas, and tie it on the foot just above the ringbone, and wet it twice each day. Keep it on about four weeks."

The *Ohio Valley Farmer* says,—"Dissolve 1 oz. camphor in 8 oz. spirits of wine; add 1 oz. of oil of turpentine, 1 oz. of spirits of sal ammoniac, ½ oz. of oil oreganum, one big table-spoonful of liquid laudanum; rub well in with the hand for a quarter of an hour, four times a day, and a cure will be effected."

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FAT HEIFER AND HOG—CORN COBS.

Mr. A. Benton, of this village, a man seventy-five years old, fattened and slaughtered a heifer in December last, 25½ months old, weighing 710 lbs., dressed; also, a hog, 18 months old, weighing 596 lbs., dressed.

Farmers will do well to save their corn cobs to put into their hay, next hay season, as they are valuable to absorb the moisture from hay not sufficiently dry to keep well; mix in the cobs with a little salt at the same time; it well pays.

ISAAC K. DREW.

Barton Village, Vt., March 10, 1862.

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PICKLES FOR MARKET.

Will some one of your readers engaged in raising and preparing pickles for market, give an account of their management and success in this department of husbandry? FARMER JIM.

Deerfield, 1862.

For the New England Farmer.

SOUTHERN ILLINOIS.

MR. EDITOR:—Since the publication of an article on South Illinois in your paper, I have received a letter from one of your readers, making farther inquiries. With your consent, I propose to answer those queries through your paper. Fever and ague is still somewhat prevalent here, although it is far less so than ten years ago. To persons of correct dietetic habits, who are temperate in all things, who keep themselves clean by frequent bathing, (especially in warm weather,) and take plenty of exercise and fresh air, and have pure, soft water to drink, the ague has no terrors, and their liability to diseases of any kind is no greater here than in Massachusetts or New York.

From a record of the weather kept in this county, I make the following quotations: For the month of July, 1861, highest temperature in shade, 105°, on two days only; mean temperature for the month, 68°. January, 1862, lowest point, 2° below zero. Mean for the month, 40° above.

The roads here are not as free from mud in winter as in New England, but they are in summer and autumn. We have much rainy weather in winter, and as a matter of course, all the older roads are more or less muddy, but never so bad as to be impassable. The ground does not freeze half as deep as in Massachusetts, and of course the mud is not very deep, not as much so as in Northern Illinois. The original settlers of Egypt are nearly all of Southern origin, mostly from Tennessee and the Carolinas, and are behind the "Down Easters" in almost everything pertaining to a highly civilized and progressive people. On the completion of the Illinois Central Railroad, eight years ago, the Yankees began to flock in, and now about one-third of the population, in the vicinity of the railroad, are from New York, Ohio and New England, comprising teachers, professional men, mechanics, farmers, and pomologists, many of whom would rank high in their respective callings in the Eastern States.

We have a free school system similar in some respects to that of Massachusetts. All the schools must be kept in operation six months in each year to entitle the district to its share of the school funds, and the Directors can extend the school term to eight or ten months, if they wish. In most of the districts and villages along the railroad, or near it, Eastern teachers are employed. Last year teachers were paid from $30 to $50 per month of 20 days; this year wages are reduced 15 per cent.

Good schools and churches are not as abundant here as in New England, but the march of improvement is rapid, and the time is not far distant when the enterprising, energetic and progressive Yankees will have a majority here, and thousands of bushels of luscious fruits will find their way to a Northern market from this once benighted "Egypt."

There are already some four small nurseries here; some of them are being enlarged, and will probably be able to meet the demand, as some of them are branches of larger nurseries in Ohio. Wholesale prices of fruits shipped North from here last season were about as follows: Peaches from $1 to $2,50 per box, (¼ bushel.) Early apples, from $2 to $3 per barrel, (2½ bushels.) Early pears, such as Bartlett, $5 to $6 per bushel. Grapes, Catawba, 10 to 15 cents per pound. Tomatoes, from $1 to $6 per box, (3 pecks.) Strawberries, from $4 to $8 per bushel.

It pays well to raise peaches for drying and canning. In shipping North, the earliest fruits and vegetables bring the highest price. Gardeners generally plant tomato seed in hot-bed in February, and have fine large plants by April 1st.

I have never seen or heard of any winter-killing of fruit trees or their branches. There are seedling peach trees here 40 years old, and still bearing beautiful crops. The hard winter of 1855–6, which destroyed many thousand peach and tender varieties of apple trees in North Illinois, did no damage in South Illinois, farther than killing a part of the peach buds. Young fruit trees, as a general thing, will grow one-fourth more here during the season than in the Eastern States, with same culture. The Sugar Maple is not plenty enough to be available for sugar making. Sorghum does finely, making a growth of from 9 to 15 feet high.

Our long summers are just the thing for such semi-tropical plants as sorghum, tobacco, cotton, sweet potatoes, castor beans, etc.

In my former letter, I stated that plenty of land could be had for from $5 to $50 per acre, according to location and improvements. This includes the buildings, as land which has been partly or wholly cleared of the native forest, generally has buildings of some kind upon it, but the older buildings are rough, cheap tenements. The value at which land is rated, depends more on its proximity to a railroad depot, than the improvements on it. For instance, at this place, (Jonesboro' Station,) unimproved land within one mile is valued at $40 per acre, while just as good land, which has been partly cleared and cultivated, three miles distant, can be had for $15; five miles, $5 to $10.

The cost or labor of clearing woodland here is much less than in most of the Eastern States, the growth of timber not being as large and dense, except on "bottom lands."

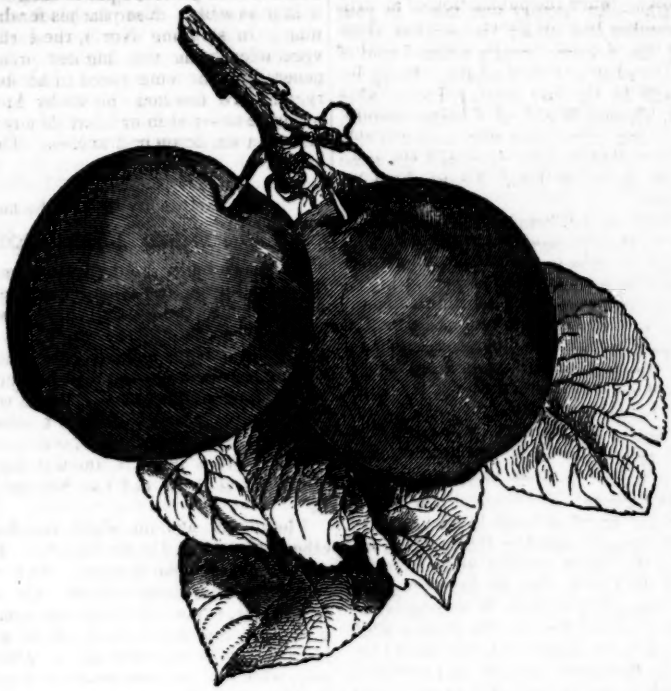
Good springs of pure, soft water are *not* as numerous here as at the East, although *some* of them equal the springs of New England. A part of the surface is underlaid with limestone. In the sandstone formation, the springs furnish soft water. Good-sized, durable cisterns can be made for $25. We have limestone and sandstone quarries furnishing good building material. Also clay suitable for brick and potter's ware.

I will cheerfully give any farther information in my power to those desiring it, if they will inclose a post paid envelope for the reply to their queries.

A. BABCOCK.

Anna P. O., Union Co., Ill., March 5, 1862.

REMEDY FOR RINGWORMS.—The *North British Agriculturist* says that the disease locally known as ringworm or tetter, which shows itself about the head and neck of young cattle, in the form of whitish dry scurve spots, can be removed by rubbing the parts affected with iodine ointment. The disease may also be combated by the use of sulphur and oil; iodine ointment is however to be preferred. As this skin disease is easily communicated to the human subject, the person dressing the cattle should wash his hands with soap and hot water after each ointment.



THE ROYALE HATIVE PLUM.

For several years past, the plum crop in all this region has been very light,—so light, indeed, that few persons are now willing to devote much time in attempting to raise it. The subject has received the most careful attention, both from cultivators and amateurs, in different sections of the country—but as yet with little encouragement that we shall be able to overcome the difficulties with which we have been contending.

The chief obstacle in the way is the *black knot*,—that has so far gone on in its fatal progress, and has destroyed thousands of trees that promised to reward the cultivator with rich harvests of delicious fruit. No one yet knows how to destroy, or even arrest, its destructive tendencies. The opinions of the most skilful are not unanimous upon what causes the disease, whether it be in a vitiated circulation, or is occasioned by the operations of insects.

If the trees escape the plague of black knot, and show a fair promise of fruit, the curculio comes, and with his sharp pincers opens a little place in the skin and deposits a minute white egg, which, in due time, produces a worm that feeds upon the young fruit until its vitality is destroyed and it drops to the ground, the worm going with it and secreting itself in the soil. to appear again the succeeding year, and thus perpetuate, forever, this second plague.

This plum is called *The Early Royal*, and *Mirian*, as well as by the name at the head of this article.

The fruit from which our picture was taken came from the grounds of our friend VANDINE, of Cambridgeport. By "some philosophy that we have never dreamed of," he still succeeds in getting good trees and good plums, in spite of curculio and black knot. Downing's account of the Royale Hative is as follows:—

A new early plum of French origin, and the highest excellence. It is yet very scarce with us, having lately been received from the garden of the London Horticultural Society. It strongly resembles, both in appearance and flavor, the Purple Gage, or Reine Claude Violette, but ripens a month earlier.

Branches *very downy*. Fruit of medium size, roundish, a little wider towards the stalk. Skin light purple, dotted, (and faintly streaked,) with brownish-yellow, and covered with a blue bloom. Stalk half an inch long, stout, inserted with little or no depression. Flesh amber yellow, with an unusually rich, high flavor, and parts from the stone, (adhering slightly, till ripe.) Stone small, flattened, ovate. Begins to ripen about the 20th of July.

For the New England Farmer.

WHITE, CHESTER COUNTY SWINE.

MR. EDITOR:—An inquiry was made in your paper in November last, about the peculiar characteristics of the Chester county white breed of swine, and also what was their origin. Being interested myself in the last inquiry, I soon after wrote to Mr. Thomas Wood, of Chester county, Pennsylvania—the most extensive dealer in this breed in my knowledge—and proposed the same questions, with others, to him. I copy from his reply as follows:

"They are what we call home-made hogs, having been brought to their present condition by a long course of judicious crossing and careful breeding by many of our best stock men. The origin or first impulse to this improvement was the importation to this county of a pair of very fine pigs, by Capt. James Jeffries. They were brought from Bedfordshire, England, about forty years since. They claim no foreign blood since. As the swine thus imported began to have some notoriety, they were called Chester county hogs, after the county in which they originated, as in England the improved stock is named after the shires or counties in which they originate. The Chester has become the most popular breed of hogs in this country. I have been engaged in breeding thirty years, and shipping them for eight or nine years to nearly every State of the Union, Canada and Nova Scotia, and the demand for them is constantly increasing as they become known. They are a white hog, long, square built, short head, and good ham, and will readily fatten at any age, and we think make more pork to the amount of feed consumed, and in a shorter time, than any other breed. They are easily kept, and quiet, good breeders."

In reply to my question as to their weight when well fattened, at given ages, he says:

"I have known several to weigh 300 lbs., and some over, at 9 months old; also several to weigh between 600 and 700 at 18 months old; several to weigh over 800 at a little under 2 years old, and one to weigh 990 at 20 months old, dressed weight."

My father has been breeding the Chester county hogs for about four years, and his experience fully confirms the opinion expressed by Mr. Wood, that "they make more pork, according to the amount of feed consumed, than any other breed." They are a remarkably hearty and healthy breed, and are the most docile and gentle mothers I ever saw. They combine so many good qualities that they not only are rapidly gaining in their popularity, but of right, should be "the most popular breed in this country." D. H. GOODELL.

Antrim, N. H., March 5, 1862.

A NATURAL CURIOSITY.—A singular instance of the foresight of a field mouse has just been brought under our cognizance. A person clearing the garden ground of Mr. Thos. Thompson, Dalkeith, Scotland, came upon a growing turnip, which he pulled up by the root. Guess his astonishment when he found that the turnip was completely hollowed out as neatly as if it had been done by the chisel of a joiner, and the interior filled by large garden beans. The work, from the size of the hole whence the inside of the turnip had been extracted, was manifestly that of a mouse, and the object, no doubt, of filling the interior with beans was to provide against hunger in the barren winter weather. Near the place where the turnip was growing there were several stalks of beans, upon which some pods had been left, and it is supposed that the 'cute mouse had helped itself to these. We counted the beans in the turnip—a small one—and found that they amounted to no less than six dozen and two.—*Scottish Farmer.*

For the New England Farmer.

A WORD ABOUT COLTS.

An impression, and I think an erroneous one, prevails with many that colts are injured by early training. That some colts are injured, and their constitutions broken, by cruel and rough treatment, before they have acquired their strength, cannot be doubted; but careful, judicious training, is as important with colts, as with steers, or with children, even. In fact, I believe it true of all young animals intended for domestic use, as of a child, "Train them in the way they should go, and when they are old they will not depart from it."

I have two colts, one eight months old, and the other one year and eight months. They are both accustomed to the harness. The oldest I have frequently used in the sleigh. On one occasion this winter, when the sleighing was good, it has taken me, together with my little son, to Portsmouth and back, a distance of nine miles, each way, with no inconvenience or injury whatever. Some persons who knew the age of the colt, and the distance it travelled, remarked to me, "You will kill that colt."

This remark induced me to write this short article. Without knowing the circumstances, the reader, perhaps, would form a similar judgment—but the colt is large of its age, in good condition as to flesh, and high spirited; and I required it to walk at least two-thirds the distance each way. It was well fed in the city, taken through streets where it could hear various sounds, and witness all sorts of objects—still it was not suffered to tire, or scarcely to sweat at all, and to every appearance was as lively and bright when I reached home as when I started. To have forced it beyond its strength that distance, or half the distance, would have been injurious—but careful training is always beneficial, and we rarely begin too young with anything.

Lambert Maynard, Esq., of Bradford, Mass., the owner of one of the finest stallions in New England, (Trotting Childers,) who has had much experience in raising and training colts, and who has sold some fine colts of his own raising at a high figure, informs me that his colts are all broken to the harness before they are a year old, or as he more properly expressed it, educated. He rarely, if ever, uses a whip. As to its injuring them, to use them to young, he remarked that he never exercised them so hard as they exercise themselves when alone.

So much for early training—and now one word about feeding and exercise. Colts should never be forced with provender, nor stunted for want of nourishing food. My method is to give them as much good, sweet clover hay as they will eat clean,

with a few little potatoes; and with this feed I get as much growth in the winter as, with a good pasture, I get in the summer. On pleasant days, when there is no ice to injure them, they should always have their liberty to exercise out of doors. It is as cruel to confine a high-spirited colt constantly by his halter, as to confine a high-spirited, ambitious child to the house.

Farmers, raise good colts, from the best of stock; keep them constantly growing, without pampering; give them judicious training when young; allow them every favorable opportunity for free exercise, and we shall have what every sensible man or woman admires, good horses.

J. F. FRENCH.

North Hampton, March, 1862.

REMARKS.—Excellent. No suggestions with regard to colts can be more judicious. The highest spirited colt we ever saw, we broke in accordance with the suggestions given by Mr. French. We began by putting on the bridle, only, and continued through an entire month to add various parts of the harness, until he was perfectly accustomed to every part of it. He was allowed to stand with the harness on from morning until noon, when it was taken off, the colt watered and fed, and after dinner a part or the whole harness put on again. At the end of this time we put him to a light wagon, alone, and drove him a mile, and had no trouble with him afterward.

FOWL MANURE.

No manure obtained by the farmer is as valuable as the manure from the poultry house. Of this there is no question, and yet we can hardly answer the question, "In what way is it best to use it?" This manure is made only in small quantities, and it may be that, as a general thing, much of it is wasted. It may be thrown with other manure, muck and refuse on the compost heap, but our plan is to save for *special* purposes, and we generally use it in the vegetable garden, where it is not only valuable, but exceedingly convenient. When dry, it may be sown with onion or other seeds in the drills, at planting-time, and four or five quarts put into a barrel of rain water makes a most superb liquid manure for any beds of young plants that need stimulating. In this form we use it for our melons and cucumbers, as soon as they appear above ground, to put them out of the way of the "bugs," and on beds of cabbage, cauliflower plants, &c., for the same purpose. Celery plants, after being set out in the trenches, may be hurried up amazingly by being watered two or three times a week with this liquid food. If magnificent sweet corn is wanted, half a pint of the dry hen dung, finely scattered in each hill, will give it, and no mistake. If you have been able to grow only hard, hot, wormy radishes, next spring sow the seed in very shallow drills, (not too early) in a warm, sheltered place, then cover the bed with a thin dressing of coal ashes, and water with the liquid hen manure each alternate night, and if the season is as favorable as ordinary, you will have no cause to repent the trial. A little charcoal dust is better than coal ashes.—*Rural New-Yorker.*

LEGISLATIVE AGRICULTURAL SOCIETY.

REPORTED FOR THE FARMER BY D. W. LOTHROP.

The eleventh meeting of the series was held on Monday evening last, the subject for discussion being *Farm Implements.*

Hon. WM. B. CALHOUN, of Springfield, was invited to preside; but he observed that while the subject was important, he was not prepared to say much upon it. Machinery is producing a revolution in agriculture, and our mechanics had been very active, both in hands and in mind, resulting in beneficial effects in all the departments of labor. He would venture to call upon Mr. Howard, as he had consented to speak upon this topic.

Mr. HOWARD, of the *Boston Cultivator*, responded, and believed with the Chairman, that a revolution in farm husbandry was now going on, in this country certainly, and that the ingenuity of American mechanics was proverbial. They take the lead, he thought, of the world. In some of the inventions and improvements in farm implements we owe to America the undivided honor. Some of these are important in the economy of feeding the population of the world. He referred to the Crimean War, and spoke of the scarcity of grain in Europe at that time, and the importance of our sowing and reaping machines in furnishing a plentiful supply. At a later period, also, France and England were deficient in crops of grain, yet we had enough and to spare.

The *Reaping Machine*, Mr. Howard observed, was not in its incipiency American—it originating in England, but failing there of being perfect, the genius of this country completed it. In 1851, Mr. McCormick took his machine to England, where it was tested under some disadvantages, on the farm of Mr. Mechi; yet it sustained itself, and not only cut down the wheat, but also English prejudices to American machines. Yet in England it has been somewhat modified to fit it to their heavier crops. The *Mowing Machine* is an American invention. Allen's (with certain modifications) received the first premium of the Royal Agricultural Society, in 1860, and the preference was generally for American machines. The last year, also, we took the first premium in mowing machines.

There are many other implements in which America shines. To the American *axe* there is nothing superior, and we may regard it as the emblem of the civilization of the western hemisphere. Our mechanics, too, take the lead in *manure* and *hay forks*. The old ones were very thick and clumsy; Partridge's are light and superior. In this matter the English are improving. Our improvement in *shovels* has also been great: once we had only those whose handle was driven into a socket. Oliver Ames stands out prominently as the inventor of the American *shovel*, and so of the

spade. He is independent, and still lives. In *plows,* America has likewise distinguished herself. A cast iron one was introduced from Scotland, when Mr. Alger, of South Boston, and Mr. Wood, of New York, began to manufacture them, though somewhat modified in pattern from the Scotch, and we have maintained the lead. Mr. H. here referred to a trial of plows under the patronage of the N. Y. State Agricultural Society, in 1850, where there were 40 different ones in competition, the trial lasting ten days. The result was that Messrs. Prouty & Mears, of Boston, took three premiums for plows adapted to as many different kinds of work. The results were important, and would be permanent. There are some points, however, in regard to plows and plowing, in which we do not compare well with the English. We have lost sight of the adaptation of plows to different purposes, to an extent, and for very heavy soil, he thought the Scottish, and some of the English, superior. Their *harrows,* too, are superior to ours —ours being too heavy. Seed harrows should likewise be light. The English have a potato harrow, and implements for cleansing the soil—rooting out witch grass, for instance; the Norwegian harrow is one, and sometimes the English Grubber is made to do this work. In this matter we have been too inattentive. Our *horse rakes* are very good, but in England they are made with steel tines, and are sometimes used to cleanse their fallows.

Mr. WETHERELL, of Boston, said there was nothing more important than the plow, as it was our chief implement for pulverizing the soil. Our mechanics had done well, but could improve. He had heard the complaint that our plows cut too narrow furrows. Another objection was that they were easily broken, and the most serious was, that they did not perform their work so well as desired. He spoke of a trial of plows in Maine, where the draught was great, and observed that it had much to do with their economy. He alluded to Mr. Pusey's opinion, that while some plows required three horses, others required only one, and it was found that the size was not in proportion to the draught. The construction had more to do with the plow than the weight. To Jefferson we owe much for an improvement in this implement. Our plows are not suited to the West; the best he had seen were made in Illinois. Our material is iron, theirs is steel. Should the mould-board be concave or convex? At the trial in Maine, ours were very hard to hold by the pressure upon the hands, though some run very well; and Mr. John Johnston said this was an important matter. In fact, our plows are defective as they are, and he doubted whether we have one well fitted to pulverize the soil. He considered the question of horses or cattle for plowing. On side hills in England one horse is used before the other. He also spoke of the importance of using horse-carts, which he thought the most economical, and cited trials of Mr. Pusey, where their great value over others was demonstrated—and we should then require less laboring animals. Some changes are not improvements. A gentleman out West had said to him that there had not been much improvement in plows since Jefferson. Some farmers oppose some of the new machines. One man would not have a mowing machine and horse rake because they cut and gathered too much poor stuff. But two farmers side by side, with different practice, would show the good results of improved implements. Small farmers can hire a mowing machine; and all will find that where one can be used (by the proper preparation of the land) their farms will be worth twenty-five per cent. more than others. The speaker also commended the Clod Crusher as important in pulverizing the soil.

Mr. HOWARD, by way of explanation, alluded to the Grubber, the Norwegian Harrow, and the Clod Crusher, as used in England. As to steel plows on the prairies of the West, their clayey soil sticks to iron, not to steel. Such plows would not be important in all places.

Dr. LORING, of Salem, said it was an extraordinary fact, that the best farming did not always keep pace with agricultural implements. Our agriculture has not kept up with our labor-saving machines. The plows of Italy and Portugal are not much better than those in the time of Virgil; yet those countries have improved in husbandry to a good extent. Our mechanics have attempted to make agriculture easy; hence (together with the high price of labor) our numerous machines. Our hoes and forks are graceful in their form and highly polished, but less substantial. Yet our plows are better. To the Michigan plow there was some objection, but for spring plowing for corn it makes the soil easy, and is the best for sod land for immediate seeding. The cast-iron beam plow was also good. Dr. L. alluded to a horse-hoe and root-grubber bought for him in England by Mr. Howard. He gave some explanation of them, and regarded them as very useful on a farm. As to the working power of a farm, on light lands, he thought horse labor very good, but on rough land ox labor was preferable. Oxen, he believed, would do as much as horses. In regard to cutting hay, he had used mowing machines and a tedder. His haying was done quicker and better by them, but not cheaper than by the scythe. These machines must have two trained horses, and as in connection they are liable to get out of order, he doubted whether they were economical. Our horse-rakes are very good. The hay-fork was important, but there was some question whether we had a good instrument. What we

need is *strong* machines. The handles to our forks, shovels, &c., were too brittle; and he observed that a man once said to him that a rake was harder to winter than a cow. Our hoes are graceful, but not strong; and many of our plows are constructed to sell, not to use; and so with other things—whiffletrees, for instance. But we have good hay-cutters, and his best root-cutter was procured from Chicopee—which implement he described. We much need a good barn-hoe, one that can be got into corners; and a good barn broom was certainly worth mentioning.

Mr. ANDREWS, of West Roxbury, spoke of the importance of the reaper in the West; but even here, an attachment being fixed to it, it would be useful in cutting rye, &c. He also spoke of Cahoon's seed-sower, which sows as fast as a man can walk, and scatters evenly.

Mr. WETHERELL inquired of Dr. Loring if an acre of grass could be cut by the scythe as cheap as by the mowing machine.

Dr. LORING replied, yes. He then spoke of the horses needed for a machine, and attendant expenses, and said if we could get good mowers as cheap as fifty years ago, it would be less expensive. Mowing machines were valuable where labor was high.

Hon. JOSIAH QUINCY, Jr., thought mowing machines very important on large farms, but on small ones would hardly pay. The tedder was a useful instrument for spreading hay, as it would do the work of ten or twelve men. On his own farm he was obliged to avail himself of the labor of men. There were, however, few good mowers, especially among the Irish. At the West, mowing machines must be important. He alluded, also, to the steam boiler, for steaming food for cattle. Prindle's was economical, and good as a boiler or steamer.

Dr. LORING said steaming food for cattle was of great benefit, and alluded to a gentleman who procured a large kettle for the purpose, and made it serve very well.

Mr. WETHERELL objected to steaming food as useless, or worse than useless, and cited cases to prove it—alluding also to the experience of Mr. Peters to the same effect. Mr. Fay's steamer, too, was spoken of.

Dr. LORING replied that Mr. Fay's steamer was a little thing for the steaming of roots, and as they are not improved by the process, it was abandoned. He thought Mr. Peters would find good results from steaming food. He himself thought milk was improved by it, and rendered cheaper.

Mr. WETHERELL rejoined, advocating raw cut food with meal as the best, while Dr. LORING energetically contended for the steaming of coarse fodder; and the debate continued between them till an adjournment was moved.

For the New England Farmer.

"RUNNING OUT" OF POTATOES.

MESSRS. EDITORS:—You will confer a personal favor by giving a solution to the following in your columns, and in my view furnish an answer to an inquiry often made by farmers.

Why is it, that when we have secured some of the best kinds of potatoes, their good qualities will not last more than two or three years?

I once selected two of the best kinds of potatoes with which I was acquainted, and planted them, side by side, in the same field, for three successive years. The first year I noticed no particular change. The second year I *did*, for the *worse*. The third, all their good qualities were gone, by amalgamation, and even their identity lost, so that I abandoned them as comparatively worthless.

Once I planted three kinds, all mixed together, for twenty successive years, without the least deterioration, or change whatever.

What is there in nature that brought about these two results, so entirely different?

WM. RICHARDS.

Richmond, Mass., March 15, 1862.

REMARKS.—Some wiser head than ours must furnish the solution. Perhaps the potatoes you planted were not adapted to your climate or soil, and soon "run out." Who can tell? We have cultivated sweet potatoes for many years, but have always harvested a deteriorated crop, with the exception of a single season, when it was excessively hot and dry. Then the potatoes were nearly of the color and flavor of those brought to us from the South. Those potatoes, "all mixed," which you "planted for twenty successive years," may have been adapted to the climate and soil, and consequently had nothing to do but to grow abundantly, and be good. We shall be glad to receive some more philosophic reasons, if they exist, for the results which friend RICHARDS states.

For the New England Farmer.

A PLAN OF A SHEEP BARN.

One of your correspondents calls for a plan of a sheep barn. I will give you my experience. I should, in all cases, build a barn with a cellar, and locate the barn on level ground, if the land will admit of it, and have the cellar 8 feet deep. Were I to build 60 feet by 36 feet, I would have the posts 26 feet, running from the beams to the bottom of the cellar, and well board in the cellar to the sills of the barn. This would give the cellar 8 feet, and 18 feet for storage. Set the posts to the barn 15 feet from centre to centre—this will leave ample room for sheep racks, and for the sheep to move around. Locate the barn the longest way east and west, doors at each end, grade off 30 feet at an expense of $9 to each end, and you then have a floor the whole length of the barn; which part may be filled, if necessity requires. On the north side add a shed 14 feet wide, framed to the barn, the posts to the same 15 feet, and extend the roof to the barn, over the shed, and then we have a cellar 60 by 50 feet. If we wish to finish up for sheep, run a board partition from post to

post, north or south, with a window to slide on the north side, and in front a door 3½ feet high, to elevate or depress at pleasure by means of weights, to shut the sheep in, or out, in the yards in front, and we have in this apartment a yard 14 by 50 feet, and so on, as many yards as may be wanted, and bring water to all the yards, on a level, to every trough, and brought in at the bottom, and then there will be no freezing. A barn finished up this way will be found very convenient to haul out manure, and the shed attached will give great additional strength to the main structure—the barn.

If cattle are to be kept in the cellar, the finishing may be made to accommodate them, also, equally well. H. G.

Walpole, N. H., Feb., 1862.

For the New England Farmer.

RETROSPECTIVE NOTES.

"PLANNING AND PREPARING WORK."—If every reader of this journal would turn to the March No., page 106, and read or re-read this excellent communication from the pen of Mr. GOLDSBURY, and then put to himself the question, do I practice all the planning and preparing of work which Mr. G. here represents as essential to success and prosperity in the business of farming? he would be enabled, if he answered the question honestly, to determine his true position as a farmer.

The purpose of the writer of the article now under notice, seems to have been to persuade his brother farmers that success in their business depends *very much* upon the earnest application, not of their *muscles*, but of their *minds*, in planning and preparing for the work of the busy season of spring and summer, during the comparatively leisure season of winter. Unfortunately, this is a truth of which a great many seem to be either ignorant or regardless; and this ignorance or neglect operates not only to the injury of these individuals themselves, but tends to lower the respectability of the really noble profession to which we all belong. It is from this and similar neglects to employ mind in the management of our business, that farmers are so generally considered and called mere clod-hoppers, and other names manifesting a like disrespect for us and for our profession. Hence it comes that we all suffer in reputation on account of the thoughtlessness and laziness of a part. Hence, too, we derive our right to protest against unthinking, unprogressive characteristics of those who will neither read, nor think, nor study to make advances in the management of their business, but content themselves with plodding on in the footsteps of their predecessors. Hence, too, it follows, that we all owe a debt of gratitude to such men as Mr. Goldsbury for their efforts to convert the unthinking, and plodding routine-followers among us from the error of their ways, and to elevate and give a higher dignity to the profession of providers of the food of the world. Thanks, then, to Mr. Goldsbury for his efforts to stir up his brethren to a sense of the need which there is of applying *mind* as well as *muscle* in the business of farming, and to a practical recognition of the fact that *God has so ordered affairs* that a farmer *must* continually be aiming to make improvements, *must* continually be aiming to do better the next year than the last, and *must* plan and prepare for his work beforehand, or in winter, so as to be ready to take it up at the proper time, and to do it in a proper, or the best, manner.

And now, supposing that Mr. Goldsbury's efforts and ours have been successful in enkindling in some a determination that every year shall witness some improvement upon farm management, it is quite probable that not a few may be at a loss how to make the reading, thinking, planning and other work of the mind, in the leisure of winter, help the muscles in the busier season, in working out higher success. For the assistance of such I will now give a brief sketch of the way in which a farmer of my acquaintance endeavors to make all his reading, thinking, planning and information or suggestions from every quarter, contribute to his purpose of constant improvement.

First of all, he has a map of his farm on the first page of a writing book made of several quires of note paper stitched together. Of this book he devotes several pages to each of his fields, and every year writes what he calls Historical Notes of the crops raised, the manures applied, and the condition and capacity of the field generally. Another series of pages is devoted to a record of his plans, of the crops to be raised, the manures to be applied, the mode of culture to be adopted, &c., upon each field. This record he generally makes in March of each year, which has very appropriately been called, by the editor of this journal, the make-ready month, when all plans should be matured for the campaign of the season. Then he has a number of pages devoted to a record of what he calls Intended Improvements and Projected Experiments. And finally, he makes a record on the remaining pages, of every suggestion that may occur to himself or come from others, and of every item of information he finds in his reading, which he may think likely to be useful. These he reads over and fixes in his mind, and then proceeds to make his plans, &c., for the coming season.

MORE ANON.

DUTIES ON TREES, PLANTS AND SEEDS.—The *Gardener's Monthly*, published at Philadelphia, states that the "*Massachusetts Horticultural Society* have taken steps to memorialize Congress to impose a duty of 50 per cent. on imported agricultural productions." This may be so—though we have not heard of such action. The *Concord Farmer's Club* recently petitioned Congress to lay a duty upon imported *seeds*, but not upon plants or trees, and gave what we thought a valid reason for such a request.

☞ We learn that Mr. GEORGE CAMPBELL, of West Westminster, Vt., has recently bought four ewe lambs of Wm. R. Sanford, of Orwell, at $100 per head; fifteen young ewes of Edgar Sanford, of Cornwall, for $1800; and six breeding ewes of Edwin and Henry Hammond, of Middlebury, at $1400. The cost of the twenty-five sheep is $3600. Mr. Campbell is one of the most intelligent and enterprising sheep-raisers in the country.

AMERICAN GUANO.

We have often stated to the reader that we thought a judicious use of some of the specific fertilizers now so common among us might be *profitably* applied to most of our New England crops —not as prime agents, but as auxiliaries, after the farmer has exhausted all his skill and resources in the accumulation of manure on his own farm. This must always be his first aim. When he makes his experiment, however, it should be fairly and *liberally* done; that is, expend a certain amount of money for a fertilizer, and apply it to a portion of some crop, leaving another portion of the crop without it, but under circumstances precisely alike in every other respect; then, by a careful weighing or measurement of the crop, he will be able to learn what the fertilizer has accomplished. The error made by most persons is, that too little of the specific manure is applied, and that it is not spread over a sufficient space, and thoroughly incorporated with the soil. It should be scattered over a square of eight or ten inches, and intimately mingled with the soil around it.

We have realized great success in the use of the *American Guano* on fields of corn, and on nearly all the garden edibles, and think others may derive the same advantages, by using it liberally, say at the rate of 400 or 500 pounds per acre, and by taking equal pains in its application. We are confirmed in this opinion by a statement made by the renowned Baron LIEBIG, which we recently found in the Patent Office Reports. He says:

I have spent two months' labor in the matter. The Baker's Island guano contains more phosphoric acid than any other known fertilizer, and it is similar in its ingredients to natural phosphorite, differing from it, however, in the following remarkable particulars:

Phosphorite is in a crystalized state, and is completely insoluble in water. The Baker's Island guano, on the contrary, is amorphous, is soluble to a considerable extent in pure water, and when moistened, colors litmus paper red. The Jarvis Island guano has also an acid reaction, and is partly soluble in water. It is worthy of remark that the Jarvis guano, although only half as rich in earthy phosphates as the Baker's, gives to water a greater quantity of soluble phosphoric acid. I regard the discovery of these guano deposits as a most fortunate event for agriculture. At the present time the prices of fertilizers, like bones, are now continually on the increase, and soon the agriculturist will not be able to procure, at paying rates, an amount sufficient for his wants. Baker's Island guano, being of all fertilizers the richest in phosphoric acid, will be of especial importance. As far as chemistry can judge, there is hardly room for a doubt that, in all cases where the fertility of a field would be increased by the use of bone dust, the Baker's Island guano will be used with decided advantage. The phosphate of lime in the Baker's Island guano is far more easily dissolved than that of bones; and if we take the proportion of that ingredient to be 60 lbs. in the latter, 100 lbs. in the Baker's Island guano are equivalent to 140 lbs. of bones. Thus the agriculturist would be benefited as much by using 70 lbs. of Baker's Island guano as by 100 lbs. of bone dust. This guano contains in ammonia, nitric acid, and azotic substances, nearly one per cent. of active nitrogen. A small addition of salt of ammonia would give it the full strength of Peruvian guano.

It seems hardly possible that this guano could be employed without profit, while it contains the well-known nutritive elements which he ascribes to it, and at the prices for which it is now being sold. We hope our farmers will test it in a small way, using it liberally as far as they go, and carefully watching its effects upon the crops. We shall be glad to publish reports of such experiments.

For the New England Farmer.

THE RIGHT THING IN THE RIGHT PLACE AT THE RIGHT TIME.

MR. EDITOR:—It would be well for us, and for all mankind, if we always had the right thing in the right place at the right time. I do not know that this is a practicable thing for human beings; but if it be, we ought immediately to set ourselves about it, and reduce it to practice, because our progress, improvement and happiness depend upon it. This is more than the wisest and best of us do, and perhaps more than we can do, at present; and, if so, it is more than can be reasonably expected of us by others. It is perhaps more than God himself expects us to accomplish at present; and yet he evidently requires us to aim at perfection, and to come as near to it as possible. It would be well for us, therefore, to make this our aim, our constant study and endeavor to have the right thing in the right place at the right time.

Let us apply this motto to some of the operations in farming, and see if we cannot be excited to greater vigilance, punctuality and promptitude. Though there is no such thing as perfection in farming, yet success in the business depends, not only upon having every thing in its right place at the right time, but upon having every thing done at the right time and in the best manner possible. If we fail in either of these respects, we shall be unsuccessful in the business. For instance, if the tools and implements we use in farming be the old antiquated things of a bygone age, so clumsy, unwieldly and cumbersome as to be inconvenient, unhandy and unfitted for use, and ill adapted to the purposes of husbandry, we have not the right tools to work with; and no skill on our part, in the use of such tools, can ever make up for their deficiency. So, too, if we raise the different kinds of animals, but so small in size, so slow in growth, and so mean in appearance, as to be unsaleable and unprofitable, we evidently do not keep the right breed of animals; and no economy on our part can compensate for the want of a better stock of animals. So, too, if we raise all the different kinds of fruit, but so small and knurly and defective and ill-flavored, as to be quite useless and unprofitable; or, if we raise all the different kinds of vegetables, but so stinted and diminutive in size, and so unsavory in quality and flavor, as to be

hardly worth gathering; or, if we raise all the different kinds of grain, but of so unproductive and dwarfish a growth as to be almost worthless, we may be morally certain, that, in each instance, we have not all the right things in the right place at the right time. In all the foregoing particulars, we have utterly failed, either because we have not had the right things, or because we have not used them properly at the right time and place. We must not only have the right tools and implements and animals to work with, but we must have the right breed of animals, the right kinds of fruit, the right kinds of vegetables, and the right kinds of grain; and, to be successful in our operations, we must have all these in the right place at the right time, and make the best possible use of them. What amount of wealth, what increase of the means of doing good and of human happiness, what abundant harvests, what supplies of the necessaries and luxuries of life, what protection to life and property, and what security against the accidents and calamities of life, might be effectually secured by always having the right things in the right place at the right time, and by directing them to the accomplishment of their proper objects!

Warwick, 1862. JOHN GOLDSBURY.

For the New England Farmer.

PLOWING ORCHARDS.

Much was written a few years ago, in favor of keeping land on which orchards were set continually under the plow. If your orchard did not bear well, plow it. If it showed signs of premature decay, plow it. Thorough cultivation was the panacea, and scarcely a dissenting voice was heard. Many people, taking it for granted that those who wrote *knew* what they said to be practically true, followed the directions given in the papers. Orchards were planted, and the land was highly cultivated. In a short time, complaints began to be made that trees did not flourish well. Almost every winter some died; others were deprived of a limb, or had a few frost-bites on their bodies. At length, thought was awakened, and the query arose whether so much plowing was not a cause of decay. This led to observation, which resulted in the conviction of many minds that *too much cultivation* was a prime cause of the early decay of so many fruit trees.

To aid in proving that this conclusion was not groundless, I will mention a few cases that came under my notice. In the spring of 1853, I purchased a village lot on which were a few fine apple trees, some of them six or eight inches in diameter. The ground had not been very well cultivated for a few years, yet the trees were healthy and productive. Wishing to make them grow rapidly, and produce more abundantly, I spaded the ground under them thoroughly and very carefully. They bore well that year. The next spring I again tried spade culture, but I noticed that the earth under the trees, was literally bound together by fine rootlets, and that a great number of them were broken at every shovelful that I turned up. I began to reflect on the utility of these fibrous roots. I thought them analogous to the minute veins, absorbents, and capillaries of the human system, every one of which conveyed a certain portion of nutriment to the body, or to some organ of it; hence I concluded that the process of *constant cultivation* must be injurious.

My fears were realized. In 1855 two of the best trees died. A great many trees died that year in various parts of the country, and the cause was attributed to the weather. I have no doubt that a severe winter hastened the decay, but in this region, the best cultivated orchards were most severely injured. I can mention many instances in further proof of my position, if necessary, but defer it for the present. Suffice it to say, that observation and experience have confirmed me in the belief that orchards *should not be continually cultivated*. The roots of trees naturally run near the surface, but plowing either cuts them off, or sends them down into the subsoil, which, in most cases, yields no nourishment to plants, and is generally too hard to be penetrated by the tender roots of an apple tree. Hence the tree, being deprived of the requisite amount of light and heat, and of the proper nourishment to supply its wants, languishes and dies. I believe this to be a rational view of the case, and I doubt not that a vast amount of experience will be found coincident with mine.

That orchards need occasional plowing, and that the soil should be kept in good condition by the frequent application of manure, I do not doubt; but I would not recommend plowing very near the trees. A space nearly as large as that covered by the branches, should be left. Thorough annual top-dressing will keep the soil sufficiently loose. If the soil around the body of the trees should become too stiff, it may be carefully removed, and its place supplied by coarse stable manure, or the scrapings of the chip-yard.

Let this process be adopted, and I believe our orchards would be more hardy, more thrifty, and consequently, more productive. L. VARNEY.

Bloomfield, C. W., 3 Mo., 1862.

VEGETABLE GARDEN.—In the open air, peas and potatoes are about the first crops to be attended to. Of the former, the varieties have now become so numerous that even "new grapes" will soon have to give way in that respect. The earliest are the Prince Albert, and the "Extra Earlies."

Of early Potatoes, we think Fox's Seedling is the earliest, though in some localities the preference is given to the Early Walnut. Beets, the Early Six Week Turnip rooted, is perhaps the earliest. Carrot, the Early Horn; Cucumber, the Early White Spine, or Early Cluster; Lettuce, the Silesian, or Early Curled—to cut before heading; and the Early Butter left to head, are the first in season. Amongst the Radishes, the Old Short Top, and Red and White Turnip are still ahead; and in Spinach, the old Round-leaved.—*Gardener's Monthly.*

PRUNING A CLIMBING ROSE.—In pruning a climbing rose, all the very strong and vigorous shoots of last year should be preserved, and all weak and decayed ones, as well as old shoots exhausted by abundant flowering, should be cut away. It should also be an object to get good strong shoots as low down towards the root as possible, as the finest flowers, coming from the strongest shoots, are thereby equally diffused over the plant.

For the New England Farmer.

PROPER TIME TO PRUNE FRUIT TREES.

Mr. Editor:—I have derived much pleasure and benefit from reading the different views of writers in the *N. E. Farmer* pertaining to the same branch of agriculture. For a few years past, much has been written and said by yourself and others, in regard to the best season to prune fruit trees, and from what I could gather from others, and experiments of my own, I had become pretty well convinced that the best time to prune was the latter part of June, or the first of July. But in reading the discussions of the Legislative Agricultural Society, in the *Farmer*, recently, I confess that I felt somewhat nonplussed to find such thorough practical men as Marshall P. Wilder and A. G. Sheldon pronounce March the best time for pruning. I should have been gratified if they had more fully given their reasons for their conclusions. Mr. Sheldon said he had sawed a limb from his tree each month, and found March the best time. Now, Mr. Editor, I have tried the same experiments, and have come to a different conclusion. I have found where a limb was sawed off in March, before it would begin to heal over the wound, the stump would get seared so that it would not commence to grow over immediately at the end of the stump, but often one-fourth or one-half inch down from the end; but where I have sawed them from the same tree in the same year, and as near as possible the same size limbs, I have found the stump or wound, where the limb was sawed off in June, to heal over, often in one, and sometimes in two or three years sooner than those cut off in March.

I think there are some arguments in favor of winter or early spring pruning. We generally have more leisure, can get at the work easier, are less liable to damage other crops, and perhaps a saving of the sap which would go to nourish the tree, lost in the limb if left until June. I have found it to work well, on some occasions, to cut off limbs in winter, or early spring, leaving a stump three or four inches long, and in the following June, saw the stump off smooth and close to the body or main branch, always coating over the wound with shellac dissolved in alcohol, which can be kept in a bottle and always ready for use, and will keep any length of time if corked up tight. A good way is to put a small brush into the cork so that it will be inside the bottle, and immersed in the liquid when corked, which will keep it from getting dry and hard, as it soon would, if exposed to the air.

Perhaps Mr. Wilder or Mr. Sheldon will explain more fully their reasons for coming to their conclusions, through the columns of the *Farmer*, and thereby gratify myself, and I doubt not many others who have much confidence in their sound, practical judgment. I know that you entertain a different opinion upon the subject from theirs.

Ashburnham, March, 1862. W.

Remarks.—Sound doctrine, every word of it, and doctrine, too, for which a sound physiological reason can be given. We supposed the gentlemen referred to intended that the pruning done in *March* should take place early in the month, before the sap begins to flow freely. But it is a dangerous time, as a few warm, sunny days at that season, will set the sap into great activity, and if *the sap vessels are cut off at that time, the sap will run out* just as certainly as that water will run down hill. Nature, herself, indicates the proper time to prune, and it is not her fault, but ours, if we do not study her operations, and learn when to do it. The rule is a simple one; *prune when there is the least sap in the sap vessels or sap wood;* that occurs about midsummer, when the thin watery sap has visited the most remote twigs and leaves, has become elaborated into a substance entirely unlike that which so recently passed up, and is going down directly under the outer bark of the branches and stem of the tree, and plainly increasing their diameter. This is the favorable time to prune, because there is comparatively little sap left in the sap vessels to run out, if they are cut off. This period occurs not only in midsummer, but in the autumn, after the leaves have fallen, and will continue until a few warm and genial days intervene, when the sap sensibly feels their invigorating power, and especially if the ground, at the time, is not frozen. There is another reason why March pruning is dangerous. When a limb is cut off, the mouths of the pores are left open, and will not dry and contract as they will in warmer weather, so that if warm days ensue, and the sap is set in motion, there is nothing to prevent its running out. Winter pruning is more safe, because there is more time for the wounds to dry and contract.

For the New England Farmer.

AMERICAN GUANO.

Mr. Smith—*Sir:*—I read with interest your article in the *Farmer*, on the use of American guano for renovating pasture lands. Will you have the goodness to inform me, through the *Farmer* or otherwise, how much should be used to the acre, and any other facts that may be of use, as I have some pasture that I want to improve.

How will it operate on moist land?

Would it be beneficial to mix plaster with the guano? H. Haynes, Jr.

Sturbridge, March 14, 1862.

Mr. Editor:—In answer to my friend in Sturbridge, and others who have addressed me, asking to be further informed through the *Farmer* or otherwise, in regard to the use of American guano, permit me to say that the quantity per acre depends on circumstances, such as whether the land is to be plowed or not—and how often it will be convenient to plow it. If I had pasture land which I wished to renovate, and could plow it, I should, after properly preparing it for grain and grass seed, or grass seed alone; apply from three to five hundred pounds—three hundred pounds is as small an amount as would be advisable. On most lands I should apply at the same time about

the same quantity of plaster, either mixed with the guano, or sown at the same time. If the land did not admit of plowing, I should apply as large a quantity with plaster, *as a top dressing*, and which ought to be applied as early in the season as the state of the land will permit. I have never applied the American guano to wet land. My impression is that it will not pay to spend manure of any kind on wet or moist land, until *under-draining* has relieved it of its surplus water. So long as the soil or subsoil is kept cold by undue moisture from above or beneath, no amount of manure will coax a generous vegetation from its bosom.

No fear need be entertained of injuring seed of any kind by coming in contact with the American guano. Some persons have supposed it almost valueless because it gives off no *pungent odor*, but it must be remembered that this guano contains very little *ammonia*, which alone gives the peculiar pungency to Peruvian guano. In purchasing, be careful to get the "American Company's Guano."

T. A. SMITH.

Westboro', March 20th, 1862.

For the New England Farmer.

PROTECT THE BIRDS.

The following thoughts, written as a school composition by a young lady under my instruction, breathe so much kindness for the feathered tribes, and are expressed so familiarly, that I thought them worthy of publication; and knowing that the Editor of the *Farmer* is an able advocate of the rights of "our mutual pets," I will entrust it to his care. L. V.

BIRDS.—I have for a long time wished to communicate with my young friends, and bespeak their aid in protection of our mutual pets, the birds, that are inviting our attention and kindness by their sweet songs, and lively, coquettish ways. They flock around our dwellings, and, if properly invited and noticed, accept our hospitality, and repay us a thousand fold for all we bestow upon them. When we take the trouble to provide a few houses for them, how readily are they taken possession of, and how fiercely are they guarded, should any intruder dare attempt to rob them of their home, showing how dear the possession is. This also shows us that nothing is required, but shelter and protection, to enable us to have flocks around us sufficiently tame to be our household friends and companions. But especial care should be taken to guard them against the thousand dangers that beset them in the shape of rude boys, and cats, their mortal enemies. Worse than useless will have been all our trouble, if these deadly foes are suffered to molest them. Let us all protect the birds. S. E. C.

Bloomfield, C. W., 1862.

EARLY ANNUAL FLOWERS.—Of annuals that may be sown early there are some that are so very beautiful, and which do so well generally, that they *at least* should be grown. These are a *few* of them: Caccali coccinea, Coreopsis Drummondii, Erysimum Peroffskianum, Escholtzia Californica, Malope grandiflora, Marvel of Peru, Nemophila insignis, Phlox Drummondii, Mignionette, Whitlavia grandiflora, Clarkia pulchella, Gaillardia picta, Palafoxia texana, Linum grandiflorum rubrum, Lobelia gracilis, White and purple candy-tuft, and Phacelia congesta. Where a hotbed can be commanded, many of the tender kinds can be forwarded under glass.—*Gardener's Monthly.*

For the New England Farmer.

DECLINE OF THE HEN FEVER.

It has, in fact, disappeared entirely from my neighborhood, and hens are voted a nuisance. The old gilt weathercock that surmounts our village spire, is the only rooster in sight, and he owes his continued existence to the exalted position he has occupied for more than a half-century, as indicating for everybody which way the wind blows, and warning all not to deny their Master as Peter did. Yet this is a farming community, where every barn-yard used to be vocal with crowing chanticleers, and cackling biddies, emerging from some hidden nook where they had just deposited a fresh treasure, innocently supposing it safe.

Only here and there will you now detect the once familiar notes, and keeping poultry hereabouts has come to be the exception, rather than the general rule, because, say my neighbors, it don't pay; and worst of all, tends to scratch out the rules of a good neighborhood. But in face of these objections, I, for one, have persisted in maintaining a hennery, without being conscious as yet of any such *fowl* result as has constrained others to dispense with it entirely. Every farmer, to be sure, has his pets, and chickens have been mine; never, however, caring to be classed with "poultry fanciers" that used to kindle so with enthusiasm at sight of a shanghai rooster. To the mere matter of economy, therefore, my attention has not been so closely directed as it might have been otherwise—only I am satisfied it has not been a *losing* business. Week after week, when eggs could hardly be obtained by my neighbors for love or money, my own larder has been supplied with the genuine article warm from the nest, in midwinter, and all through a season when folks usually imagine laying hens to have suspended operations till spring. In fact, the wonder is that so many of them survive the cold snaps at all, when you see them skulking, chilled, away to roost, hopping from pillar to post, and gleaning a scanty subsistence in spite of wind and weather.

Nothing, after all, will so disarm the prejudice against keeping hens, as to have them laying at a time when, considering the high price, they may be almost said to lay "golden eggs." And all that is needed to secure this result, is some sort of a hen-house where the sun comes in through a good sized south window, and the cold is kept out by what simple weather-boarding will answer the purpose. Then, as the *Farmer* has often reminded its readers before, hens thus confined must be supplied by their keeper with such variety of material as when at large they provide themselves with, to form the egg. Of course, every intelligent reader understands what—a chunk of meat that any butcher will give away, thrown in among the biddies where they can pick it at their leisure, and if frozen, lasting all the longer. Then pounded bones and shells, or simply a box of air-slaked lime at hand, to guard against the contingency of an egg without a shell, or a mere abortion, for

want of the proper supplies, that often results in the death of the victim in the very act of laying.

In a word, let hens be cared for as an acquaintance with their habits and necessities will readily indicate, and my humble testimony is cheerfully added to the mass of evidence already furnished by others, that have entered more largely into the business, to prove that hens will pay their way in fresh eggs, even through the winter. As for the best breed, my experience has been in favor of crossing the common variety with the Dorking, Chittagong, or Bolton Grey; at any rate, some cross, rather than the native breed alone. Now, neighbors, please give the hens a new trial, and better chance than of old. W. E. B.

Long Meadow, 1862.

HOW TO RAISE ASPARAGUS.

"A Subscriber" would like to know what season of the year is best for setting out asparagus beds, and the best method of doing it.

Ascutneyville, Vt., March, 1862.

REMARKS.—We reply with pleasure, because we believe that not one-half of our readers enjoy the luxury of eating asparagus plentifully, and receiving its healthful influences as an article of food.

There is no mystery whatever in raising it. In order to do it thoroughly, so that it will produce fine crops for fifty years, select a piece of loamy land, such as would bring a good crop of corn. It should be drained land, or at least such as will not retain standing water either on the surface or in the subsoil. A piece thirty-five feet square will produce asparagus enough for a common sized family—say six or seven persons.

Commence on one side and throw out the earth two feet in width, and to the depth of eighteen inches,—or twenty-four inches will be better,—and then throw into the trench as much coarse barn manure as you can afford. Then go back on the bed and throw two feet more upon the manure deposited in the first trench; but in the meantime mingle some older manure freely with the soil as it is thrown over. In this way continue until the bed is finished. This will give a depth of two feet of pulverized soil, mingled with manure, with a bed of manure for its base; one upon which a plant of any reasonable habits ought to flourish exceedingly. Before planting, there ought to be twenty-five bushels of old, rich compost spread on the surface and raked in.

KIND OF PLANTS, AND SETTING THEM.

The plantation may be made in the spring as soon as the soil becomes friable and pleasant to work. Do not attempt to raise the plants from the seed. Let those do that who make it a business—the farmer cannot wait for so long a process. Do not procure plants less than two years old, and if they are three, a crop will be realized so much the sooner. They should be fresh, and such as have made a good, healthy growth. Such plants may be plentifully found in Boston market, in April and May, at a cost of from two to four cents per root, or cluster,—for the *stools* have a crown, which throws out a large number of long, slender roots.

The ground being thus prepared and laid level, strain your line along the bed six inches from the edge; then, with a spade, cut out a small trench or drill close to the line, about six inches deep, making that side next the line nearly upright, and when one trench is opened, plant that before you open another, placing the plants upright, eight or ten inches distance in the row, and let every row be eighteen inches apart.

The plants must not be placed flat in the bottom of the trench, but nearly upright against the back of it, and so that the crown of the plants may also stand upright, *and two or three inches below the surface of the ground*, spreading their roots somewhat regularly against the back of the trench, and at the same time drawing a little earth up against them with the hand as you place them, just to fix the plants in their due position until the row is planted; when one row is thus placed, with a rake or hoe draw the earth into the trench over the plants, and then proceed to open another drill or trench, as before directed; and fill and cover it in the same manner, and so on till the whole is planted; then let the surface of the beds be raked smooth and clear from stones.

Some gardeners, with a view to have extra large heads, place their plants sixteen inches apart in the rows, instead of twelve, and by planting them in the *quincunx* manner, that is, by commencing the second row eight inches from the end of the first; the third opposite the first; and the fourth even with the second, the plants will form rhomboidal squares, instead of rectangular ones, and every plant will thus have room to expand its roots and leaves luxuriantly.

WINTER DRESSING OF ASPARAGUS BEDS.

About the beginning of November, if the stalks of the asparagus turn yellow, which is a sign of their having finished their growth for the season, cut them down close to the earth, carry them off the ground, and clear the beds from weeds.

Asparagus beds must have an annual dressing of good manure; let it be laid equally over the beds, two or three inches thick, after which dig in the dung quite down to the crowns of the plants, by which means the roots will be greatly benefited; as the winter rains will wash the manure down amongst them. The beds will be greatly benefited if covered to the depth of several inches with leaves, seaweed, or long litter from the livery stables.

The seedling asparagus should also have a slight dressing, that is, to clear the bed from weeds, and then to spread an inch or two in depth of light dung over it, to defend the crown of the plants from frost.

SPRING DRESSING OF THE BEDS.

This work should be done from about the latter end of March to the middle of April, just before the buds begin to rise. After clearing away all the long litter, or whatever may incumber the ground, spread the short dung over the whole surface, and dig it in; if the alleys be dug at the same time, it will be very beneficial to the plants. Care must be taken at this season not to wound the crowns with the tines of the fork, but forking the bed should not be neglected; as the admitting of sun and rain into the ground induces the plants to throw up buds of superior size; to promote such a desirable object, the ground should be kept clear of weeds at all seasons, as these greatly impoverish, and frequently smother the plants.

Asparagus plants will not produce buds large enough to cut for general use, in less than three years from the time of planting, but in the fourth year, when the shoots are three or four inches high, they will bear extensive cutting, which should however be discontinued when no large buds are thrown up. The best way of cutting, is to slip the knife down perpendicularly close to each shoot, and cut it off slantingly, about three or four inches within the ground, taking care not to wound any young buds coming from the same root, for there are always several shoots advancing in different stages of growth.

The above directions are intended for family gardens.

EXTRACTS AND REPLIES.

SUPERPHOSPHATE—FLAX.

Will you please inform me whether Coe's Superphosphate of Lime can be economically used as a top dressing for old pastures and worn-out mowings? Is it lasting in its effects, or does it act only as a stimulant? How much superphosphate is equal to one cord of rotten barn-yard manure for this purpose? How much is equal to one hundred pounds of poudrette?

Can you, or any of your subscribers, answer the following questions in relation to flax, viz.:

How much of the fibre is a fair crop, per acre? What is the chemical process by which the flax is rotted, and what the cost, per hundred pounds of fibre, of rotting by said process? Where, and at what prices, can the most approved machinery for dressing be obtained? What is the cost per hundred pounds, of dressing by such machinery? And where, and at what price, could the fibre probably be sold.

Much has been written within the last few years of the profits of flax-raising, and the policy of producing it as a substitute for cotton. There is no doubt that much of the soil of Vermont is well adapted to flax-raising, and many would doubtless raise it if they knew how to dispose of it so as to make it profitable. By answering the above questions you would enable farmers to act understandingly in the matters to which they relate, and oblige at least one subscriber. ADIN BUGBEE.

Snow's Store, Vt., March, 1862.

REMARKS.—We are now experimenting on old pastures, with Coe's superphosphate; have had no results yet. Nothing will restore "worn-out mowing" but re-seeding, because there are few roots there to be restored, of the kinds of grass wanted. The superphosphate must be quite permanent in its effects. We have not the means of answering your other questions so as to give reliable information.

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LIME FOR SPRING WHEAT — WHEN TO PRUNE ELMS—SALTING CRANBERRY PLANTS—DITCHING CLAY LANDS.

I wish to learn through the *Farmer* the best method of applying lime for spring wheat on a piece of gravelly loam, where there was corn last year. There are about forty young apple trees on the piece. Would it be beneficial to the trees?

When is the best time to prune elm trees? I have one of over a century's growth; the top is beginning to die, and it is my wish to save it for shade, if possible. Could not the top be cut off, say a part of the branches each year, and have it sprout out again?

Which is the best way to set out cranberry plants? I have a small meadow I wish to set out this spring, and I want to know the best way to do it and secure a good crop in three or four years. There have been several ways tried about here; some have failed, and the others have not done as well as was expected, leaving us in the dark?

How is the way to manage a piece of clay land where the banks of ditches will not stand the frost. YOUNG FARMER.

Franklin, March, 1862.

REMARKS.—Sow the lime at the time of sowing the wheat, say from five to ten or fifteen bushels per acre. It will probably be as useful to the apple trees as to the wheat.

Prune the elm when there is the least sap in motion—in midsummer, or soon after it has shed all its leaves next fall. The tree may be renovated by the process you speak of, if you protect the wounds from the weather.

See an article on *Planting Cranberries* in another column by Mr. Addison Flint.

Drain your clay lands with tile.

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TO DESTROY WARTS ON A COW'S TEATS.

In answer to your East Bridgewater "Subscriber" I would say that I have a young cow whose teats last spring were covered with warts. I took the water that baking beans, (common pea beans) had been soaked or boiled in, and washed the teats twice a day, for a week or so, using a shallow three-pint pan, so that I could wet all the teats at once, leaving the water to dry on them.

The warts all disappeared in two or three weeks, and the teats are now perfectly smooth and free from warts. G. W. H.

Watertown, March 24, 1862.

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WARTS ON COWS' TEATS.

I wish to inquire of you, or any one who can inform me, through the *Farmer* how to remove warts on a cow's teats and bags. I have a young heifer twenty-two months old which gives milk. Her bag and teats are covered with small seed warts, such as are usually found on the teats of cows. A SUBSCRIBER.

East Bridgewater, March 10, 1862.

REMARKS.—Some persons tie a horse hair around the wart when it is well-defined, tightening it occasionally, when it will eventually drop off. "T.," in the March number of the *Farmer* for 1860, says "equal parts of lamp oil and molasses will cure the worst of warts on man or beast."

—

SAWDUST FOR BEDDING.

I have frequently seen mention in your paper of the use of sawdust for bedding for horses. I have used it for the last ten years for horses and cows, and would not be without it, if I could obtain it by going four miles for it. My cows go from the barn in spring as clean as they come from the pasture in fall. I think if our milkmen would try it, they would find a very great convenience in the milking operation, and, besides, their customers would not complain so much of the milk having a barn taste. T. CROSS.

—

LEAKS HER MILK.

I have a valuable cow, who for two summers past, has leaked her milk—the milk dropping from her most of the time, and instead of giving eight or ten quarts, as formerly, would only yield two or three. I have tried milking at noon without any benefit. She is about to come in again, and I am anxious to know of a remedy. Can you or any of your readers aid me? C.

Abington, March 20, 1862.

MARINE MANURES.

A portion of the report of the Secretary of the Maine Board of Agriculture for 1861 is devoted to an elucidation of the value of rockweed and fish as fertilizing agents. The matter was personally investigated by the Secretary, who traversed the whole length of the seaboard for the purpose. Rockweed and musclebed have long been used to a limited extent and with satisfactory results, but they are too bulky and heavy for long transportation into the interior, although they prove of more value the further inland they are carried. A more important fertilizer is found in the migratory sort of fish which swarm on the coast, such as menhaden, commonly called pogies or hard heads, and herrings, which can be taken in immense quantities. The business of catching them has of late years assumed considerable importance in some of the shore towns, especially of Hancock county, in the manufacture of fish oil from pogies, and many vessel loads of oil are now annually exported and sold to be used chiefly in the preparation of leather. The fish are first boiled, and then pressed. After pressure there remains a pumice or chum, as it is called, which was formerly thrown away, but has latterly been used in a rough way for manure, and mostly with good results, but not always, as so active and powerful a substance should be thoroughly composted or prepared and used with care. The yield of hay on some farms in the shore towns has, within a few years, been increased from half a ton per acre to two tons, from the use of "pogy chum."

The "chum" is dried by exposure to the sun and air, upon a platform, with a shed to protect it from rains and fogs. It is then ground and packed for transportation. One man at Eastport made 150 tons of this "fish guano," as it is called, last year, from herrings, which was sold to go to Connecticut, where the manufacture and use of fish guano has created a greater demand than can be supplied by the amount made there. It readily commands $30 per ton, which pays so well that he is extending his business.

For the New England Farmer.

CRANBERRY CULTURE.

The first requisite for success in cranberry raising is to select a piece of land which can be flowed in the winter. The best land, in my opinion, is a level swamp so thickly covered with trees or bushes as to exclude all grass and weeds; ditch it so that the water can be drawn off to the level of the swamp, build a dam and cover the swamp with water. After it has frozen, in the fall of the year, cut the trees and bushes even with the ice. Then by raising the water a few inches the stumps will be covered and at the end of the next summer you will have a swamp "without any green thing" growing upon it. Clear off or burn the bushes, and the ground is in readiness for the vines.

There are many advantages in spring setting, but at whatever time they are set, the vines should never be placed more than eighteen inches apart, and as much nearer as time and the abundance of your vines will admit; the closer the vines are set, so much the sooner will there be a crop of berries, and so much the less will be the trouble of weeding.

I have never seen vines flourish as well with the same amount of care, as in swamp land treated as I have above described; weeds of all sorts will come in, but they can be pulled out as easily as from a carrot bed.

I have seen cranberry yards prepared by plowing and cultivating meadow lands until completely subdued; by taking off the sward ten or twelve inches in depth, and by covering with sand from three to five inches in depth; but all of these methods I believe to be inferior in their results to the way which I recommend.

My method has the double advantage of procuring a better and surer crop, and of doing it at a far less expense.

The most successful experiment in cranberry raising that I have ever seen, is in a small pond-hole, which, without any natural outlet, retained the water so late in the season that the only vege-

tation it sustained was a soft carpet of moss. This being drained, and set with vines, has produced a large crop of berries, very superior in size and color; the location being such that they could remain on the vines till late in the season without danger from frost.

CRANBERRY VINE WORM.

Last June nearly an acre of my best cranberry vines presented an unusual appearance. The young shoots seemed to be blighted, and I soon found webs forming over the vines, with here and there a worm. Wherever they went the crop was destroyed. Some few of the vines were out of water during the winter.

Can these worms live where the vines are completely covered with water during the winter?

What is the remedy for them?

Is late flowing sufficient? ADDISON FLINT.

North Reading, Mass., March 14, 1862.

VISIT TO THE GREAT WALL OF CHINA.

Mr. Fonblanque communicates to the London *Times* a graphic description of a visit to the Great Wall of China. The following are extracts:

Accompanied by Mr. Dick, an excellent Chinese scholar, and attached as interpreter to the Commissariat, I left Tien-tsin on the 18th of March, and after a three days' ride through as uninteresting a country as can well be conceived, came in sight of the fine solid wall which encloses the straggling mass of ruin, dirt and decay, called Pekin.

Chinese villages are, at best, dreary and squalid looking, but on this route, where the dogs of war have so recently been let loose, there is something harrowing in the misery and desolation of the scene. Has grinding oppression and long suffering deadened the heart of the Chinese peasant to all sense of injury? Or has he, after all, a Christian feeling of forgiveness toward his enemies, for which no orthodox churchman would give the Pagan credit? I cannot explain it, but I own to something like a sense of shame having come over me as we two solitary, unarmed strangers passed through crowds of men, wemen and children, standing by the charred ruins of their homesteads and among their shattered household gods, without being met by a single angry look or gesture —nay, more, always receiving a ready and friendly reply to every question. Perhaps they felt grateful that we had, at any rate, spared their lives, which is more than they can expect from their countrymen, the rebels, when they pay them a visit.

Some of the villages along our road were mere heaps of rubbish: others retained more or less the semblance of human habitations. In the larger ones, such as Ho-si-woo, which it may be remembered was for some time in occupation of our troops, the late enemy's inscriptions on doors and walls seem to be piously preserved as agreeable relics, and such familiar garrison words as "Officers' Quarters," "Canteen," "Fane's Horse," "Commissariat," "General Hospital," &c., meet one at every turn; though one cannot but remark with regret that the buildings which appear to have afforded shelter to the invaders are sadly devoid of everything in the shape of wood-work, which was probably used as occasion required for cooking dinners and boiling water. A celebrated and imposing pawnbroker's shop, which was "looted" here, has not yet recovered itself. But let it be borne in mind that in pillage, as in wanton destruction, the Chinese themselves far excel the British or even the French soldier; the bonds of restraint once removed, and a Celestial mob have no patriotic or religious scruples as to the property of Mandarin, priest or peasant—as they fully exemplified at the sacking of Yuen-ming-yuen and the Llama temple, the proceeds of which are to this day openly offered for sale at more or less exorbitant prices in the shops of Tien-tsin.

A FRENCH BISHOP IN CHINESE ATTIRE.

At Ho-si-woo we met a French missionary bishop on his way to Europe, after having passed twenty-five years in China. He was dressed in the native costume, even to the pigtail, and appeared to be treated with great reverence by the unbelieving crowd who flocked in to see the "Mandarin priest." The self-devotion, the zeal, and as a very general rule, the pure and simple lives led by the French missionaries in China, (and their number throughout the empire and the kingdom of Siam exceeds 1500,) are not without their effect upon the people, although this is not displayed by wholesale and indiscriminate conversion to nominal Christianity.

THE GREAT WALL.

Another day's journey brought us to Chataou —a hamlet at the foot of the Great Wall. The road for the last fifteen miles had been so bad that we were obliged to leave our horses at Nankan, hiring in their place Tartar ponies. Nothing less sure-footed than these shaggy, hardy little beasts could have carried us through those rugged mountain paths, which we would have done on foot, but that one mile's march over the sharp rock which forms the pavement would have left us shoeless.

At daybreak on the following morning we climbed the highest peak of the mountain range, and there, standing on the top of the great wall, reflected upon the stupendous folly of this wonderful work of human industry, which is said to have cost the country two hundred thousand lives from sheer physical exhaustion. The wall, which is built of stone and brick, is twenty feet high and fifteen feet broad, surmounted by a double parapet, loopholed on the north side. As far as the eye can follow the mountain range it winds over the ridges of the precipitous black rocks like a gigantic serpent crawling along, and with its breath poisoning all around; for turn where you will, nothing meets the view but the desolate, dreary tract of rock, unrelieved by a blade of grass or a tuft of moss, and huge boulders strewing the base of the mountain sides. It was the whim of a tyrant to build a wall where Nature had already built a barrier far more effectual than anything that human art could construct. However, there it remains, after a lapse of nearly two thousand years—a monument of the cruel folly of one man, and the patient industry and sufferings of many thousands.

Having made an abortive attempt at a sketch, and tried in vain to discover one redeeming feature in this vast scene of desolation, I secured my brick, and descending to the pass, remounted

to proceed homeward. Our guard could hardly believe his senses—certainly he doubted ours. When at Nankan mine host inquired what we were going to the Great Wall for? Our honest answer met with no credit. Were there not walls everywhere? Was not the wall of Pekin much better worth looking at? And then, as for shooting, why come so far for game when it could be bought in the market at our very doors? His impression evidently was that we had some sinister project in view; but when we returned with the brick, the good man simply burst out laughing, and set us down for a couple of harmless maniacs.

For the New England Farmer.

WHEN SHALL WE SOW OUR WHEAT?

MR. EDITOR:—This is a question of great importance, if insects appear again by millions, as they did last year. Wheat sown in the spring is not a very certain crop, it is so liable to be injured by the midge. For two years past, in this vicinity, when wheat has been sown before the middle of April, it has not been injured much by insects, and has yielded from fifteen to twenty bushels per acre. That which has been sown in the month of May, in some cases, has proved an entire failure, and in others, not more than from six to eight bushels per acre have been harvested. The wheat that I sowed the 14th day of April, last spring, yielded at the rate of fifteen bushels per acre. That which I sowed the 25th day of May, yielded only eight bushels per acre. It was a clay soil, favorable to the growth of wheat, and probably would have yielded twenty bushels per acre, if the insects had not injured it. The aphis did some damage, but not so much as the old fashioned midge.

I never saw insects injure late sown wheat so much as they did last year; I speak with reference to that which was sown the last of May. Some of my neighbors had good luck last year, with wheat sown as late as the 12th day of June.

If these facts that I have stated here, ought to guide us any for the year to come, we must sow our spring wheat before the middle of April, if the soil is dry enough, or sow it from the 5th to the 12th of June.

I think the new Black Sea wheat, imported by Messrs. Nourse, Mason & Co., about three years since, is the least liable to be injured by insects; indeed, it has proved itself so in this vicinity.

WHEN SHALL WE PLOW?

This is a question that has been often discussed in your invaluable paper; but I find that there is a great difference in the opinions of farmers. We, I mean the farmers of Addison county, most all agree upon this one thing; that is, that clay land ought to be plowed in the fall, so that the action of the frosts through the winter will pulverize it and fit it for cultivation in the spring, without harrowing over clay nubs as large as washtubs. Fall plowing, also, hastens the decomposition of vegetable matter, and the team performs the labor easier, than it does in the spring. Gravelly or loam stubble land, if plowed in the fall, ought to be plowed again in the spring, for there is no danger of plowing such land too much; the more the better. The more we pulverize the soil, the more the roots will spread in pursuit of nourishment, and the gases will enter the soil more freely.

By the experiments of the chemists it has been ascertained that at least nine-tenths in bulk of a plant consists of the constituents of the atmosphere, which enter by the roots as well as the leaves. Now if that is so, and we have no reason to doubt it, the more we pulverize the soil, the greater reward we shall get for our labor.

Middlebury, Vt., 1862. OLIVER P. MEAD.

REMARKS.—We are glad our correspondent has called attention to the early sowing of wheat, as no doubt rests upon our mind that many a crop is lost by being sown too late. The rule should be to get it in just as early as the soil is sufficiently dry to be finely pulverized by our common implements. Mr. ELIJAH WOOD, of Concord, said in an article published in the Monthly *Farmer* for October last, "Do not be fearful of sowing the seed too early on account of cold. Get it in as soon as you can possibly work the ground."

For the New England Farmer.

HOW TO GET A LARGE CORN CROP.

I propose to raise a field of corn, and to that effect have turned under eight acres of green sward on interval land, upon which it is said one hundred bushels of shelled corn has been raised per acre in one season. I have hauled twenty cords of muck, of good quality, into my cellar, which has cemented walls, upon which falls the droppings and leakage of seventy head of cattle. I propose to mix the muck with the manure and spread ninety-six cords broadcast, which makes twelve cords on an acre, plow in with a harrow-plow, furrow out and plant on the ridges.

Will I be apt to succeed in raising a large crop of corn, oats and grass with such quantity and quality of manure, if not, wherein shall I change my plan? A SUBSCRIBER.

East Berkshire, Vt., March 5, 1862.

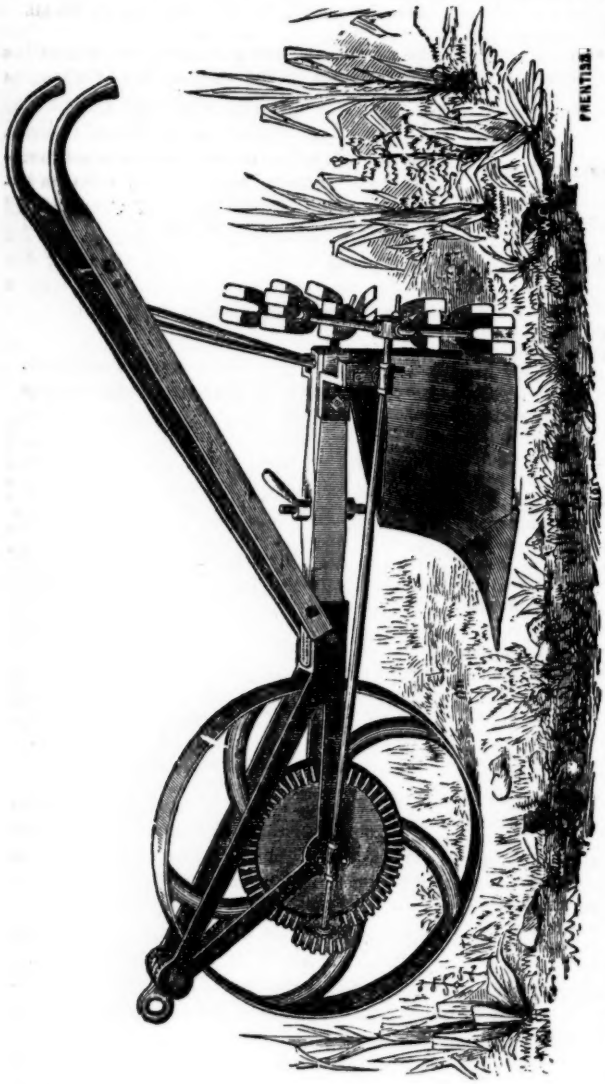
REMARKS.—Under the treatment you propose to give your land, with a favorable season, you can scarcely fail of securing seventy-five bushels of corn per acre, perhaps more. We see nothing to suggest but to add some quickener to the hill that will give the corn an *early start*, so that it shall be out of the way of September frosts, if they should come. A compost of hen manure or night-soil, or a gill of American guano or Coe's superphosphate of lime, would be likely to accomplish this, if added to each hill, and thoroughly mingled with the soil, over a space of ten or twelve inches.

AMERICAN MECHANICS.—The improvements in farming tools are exciting compliments toward American ingenuity and enterprise throughout the world. One of the best authorities in these matters—the London *Mark Lane Express*—declares that "the Americans have driven our English plow-makers out of the Australian, Indian and other colonial markets, owing to their lighter and cheaper articles."

For the New England Farmer.

WETHERELL'S HORSE HOE.

MR. BROWN:—In compliance with your request, I write you my experience and views in the use of Mr. LORIN WETHERELL'S *Hoeing Machine.* I have used one of his machines the past three years, with the greatest profit and satisfaction, of any machine or implement that I ever used on my farm. I have used mowing machines the last eight years, and intend to obtain and use all implements that are profitable in the saving of labor.



Mr Wetherell, of Worcester, is the inventor and manufacturer of this machine of which he has two patterns. The double machine, as represented in the cut above, has two sets of gear wheels and a double mould-board plow, and does the work on one half of two rows at a time. It is well to stir the ground with the horse hoe or cultivator, as you would for hoeing with the hand hoe, for the reason that the double plow does not enter the hard soil readily. The rows for this machine should be about three and a half feet apart, and I contend that a man can do better work with this machine in a potato field than he can with a hoe; and a man and horse, under favorable conditions, can hoe *eight or ten acres in a day;* therefore the machine will pay for itself in two or three days' work, which is more than any other machine that I know of will do.

The price of this machine is twenty-five dollars. It seems a high cost, but compared with its utility, it is the cheapest machine that I ever bought.

It is not easily got out of order, as mine has been in use three years, and loaned more or less every year, (and the first year to all my neighbors,) since which the most of them have bought one, and there has been no expense yet, in repairs.

The other pattern is a single mould-board plow and one gear wheel. It hoes one half of a row at a time; and as I have been informed by those who have used both machines, that the single machine needs no previous preparation of the soil, as the plow is so constructed that it readily enters ordinary soil, and does its own digging and hoeing at the same time. As it hoes but half a row at a time, it is adapted to rows of any width.

In the experience of those that have used them both, (which I have not,) the preference is with the single machine, the cost of which is fifteen dollars.

HORACE WARE.

Marblehead, April, 1862.

REMARKS.—In a conversation with Mr. WARE upon the use of labor-saving implements upon the farm, he spoke of the *horse hoe,* of which he has given an account above. We had examined the implement several times, but had never seen it at work so as to form an opinion of its merits. Mr. Ware's great experience and skill in his profession enables him to judge accurately of the value of any implement used on the farm. Our impression is that he had, last season, some ten acres in carrots, as many more in beets, cabbages and other vegetables, and twelve or fifteen in early potatoes! He not only superintends the labor necessary to

carry on these large operations, but takes a leading part in the labor himself, and is, therefore, competent to judge of the value of the tools he uses. While he enjoys the advantages to be found in the use of this *horse hoe*, he desires that his brother farmers may also reap the same themselves.

NEW ENGLAND.

Home of the good, the brave, the wise,
Bold youth and beauty bright,
The sun, as on his course he hies,
Beholds no lovelier sight.
Italia's vales with perfume glow
From every flowery tree,
But ne'er those lovely valleys know
The breath of Liberty.

Bright beams the sun on Syria's plains,
Where ancient prophets trod,
And held, in Nature's forest fanes,
High converse with their God.
But holier are the hills that bind
Thy stormy ocean's shore,
For there the sacred human mind
Knows its own strength once more.

There, in the cottage and the hall,
As bursts the morning ray,
The hymn of praise ascends from all
To Him who gives the day.
There, as the evening sun declines,
They join in harmless glee;
On all the beam of pleasure shines,
For all alike are free.

S. G. Bulfinch.

PUNISHMENT OF CHILDREN.

In the March number of the *Atlantic Monthly* the "Country Parson" has a charming little essay on "The Sorrows of Childhood," in the course of which he makes these remarks:

An extremely wicked way of punishing children is by shutting them up in a dark place. Darkness is naturally fearful to human beings, and the stupid ghost stories of many nurses make it especially fearful to a child. It is a stupid and wicked thing to send a child on an errand in a dark night. I do not remember passing through a greater trial in my youth than once walking three miles alone (it was not going on an errand) in the dark, along a road thickly shaded with trees. I was a little fellow; but I got over the distance in half an hour. Part of the way was along the wall of a churchyard—one of those ghastly, weedy, neglected, accursed looking spots where stupidity has done what it can to add circumstances of disgust and horror to the Christian's long sleep. Nobody ever supposed that this walk was a trial to a boy of twelve years old, so little are the thoughts of children understood. And children are reticent—I am telling now about that dismal walk for the very first time. And in the illness of childhood children sometimes get very close and real views of death. I remember, when I was nine years old, how every evening, when I lay down to sleep, I used for about a year to picture myself lying dead, till I felt as though the coffin were closing round me. I used to read at that period, with a curious feeling of fascination, Blair's poem, "The Grave." But I never dreamed of telling anybody about these thoughts. I believe that thoughtful children keep most of their thoughts to themselves, and in respect of the things of which they think most, are as profoundly alone as the Ancient Mariner in the Pacific. I have heard of a parent, an important member of a very strait sect of the Pharisees, whose child, when dying, begged to be buried not in a certain foul old hideous churchyard, but in a certain cheerful cemetery. This request the poor little creature made with all the energy of terror and despair. But the strait Pharisee refused the dying request, and pointed out with polemical bitterness to the child that he must be very wicked indeed to care at such a time where he was to be buried, or what might be done with his body after death. How I should enjoy the spectacle of that unnatural, heartless, stupid wretch tarred and feathered! The dying child was caring for a thing about which Shakespeare cared; and it was not in mere human weakness, but "by faith," that "Joseph, when he was a-dying, gave commandment concerning his bones."

FUEL.

It is a common mistake among farmers to burn wood the same year it is cut. Two cords of dry wood will give more heat than three cords in an unseasoned state.

When the moisture in the burning wood is being evaporated, it has the power of taking up heat; its own bulk is increased one-five-hundredth part for every degree of heat added, and it travels up the chimney or stove-pipe with the heat. If wood be cut two years before its use, it will be found much more economical; all the heat will be radiated in the room, or at least a very much larger portion than when it is accompanied by moisture.

When under steam boilers, green wood will not make steam, at least in the boiler, for the heat is used in converting the water of the wood itself into steam; it passes through the flues into the chimney, without heating the boiler.

This is true not only of the wood, but also in degree of coal, especially bituminous coal, which, when wet, radiates but little heat, the majority passing up the chimney. Even anthracite coal is capable of holding some water. It should always be carted on a dry day, and placed under cover for winter's use.—*Working Farmer.*

Rhubarb Wine.—Messrs. George Skilton & Son, of Charlestown, manufacture a wine from rhubarb which we have tasted on two or three occasions, and which we consider an excellent article for those who need its tonic or other influences. We are informed that it is made and preserved without the aid of spirit of any kind. The manufacturers have the certificates of several well-known physicians, who state that they have used this wine with very pleasant results in cases of debility and sickness. It is limpid and clear, light-colored, and has a fine, rich flavor.

Benefit your friends, that they may love you still more dearly; benefit your enemies, that they may become your friends.

LEGISLATIVE AGRICULTURAL SOCIETY.

[REPORTED FOR THE FARMER BY D. W. LOTHROP.]

The twelfth meeting of the series was held at the State House, on Monday evening last, when the subject for discussion was—*The Breed of Horses best adapted to Massachusetts.* Dr. LORING, of Salem, was invited to preside.

The chairman observed that we all understood the value of horses, as they were not only a luxury in civilized life, but a necessity in various departments of labor, particularly so to the farmer. In regard to the best breeds or kinds, it was pretty certain to him, negatively, that the *large*, or the *thorough breeds*, were neither of them the proper and economical kinds for general use in Massachusetts. He had often expressed his objections to large animals, such as cattle, sheep, &c., and he would do the same in respect to horses. One is astonished in looking at large Cleveland Drays, weighing 1500 or 1600 pounds or more; but for ordinary purposes, the Suffolks and Black Hawks, weighing 1000 pounds or less, were superior to them. They were light and elastic, compact in organization, and the kind which Youatt would recommend. They are of the class we need, as they never tire, and can do as much work as the larger ones. So as to the Morgan horses; they are firm, compact, active, good roadsters, and are not surpassed for farming purposes generally. Their strength is proverbial. Dr. L. also spoke of the less expense of feeding these smaller horses, and said that in their construction, too, there were no such horses as we have. For the present war, the horses from Vermont, weighing from 900 to 1000 pounds, are the best, and in fact our finest horses come from that State; and we in New England should congratulate ourselves that we have such a race. These excellent horses are indigenous or native to our soil—not even the Morgan breed has any thorough blood now. The coarse horses of Maine are not so good as those more compact ones from Vermont. For ordinary purposes, he believed, we had a better race of horses than we could import. In fact, some of our Black Hawk mares, worth $1000 each here, have doubled their price in England.

Of thorough breeds, their mechanism is not so good and hardy as others. They are almost useless in England; they break down, are not fit for roadsters, plowing, &c., and we violate the rules of sound mechanism by their importation and in-breeding. Dr. L. here alluded to the osteological formation of a good trotting horse in regard to the *humerus* and *scapula*, giving him the power to raise his fore legs with ease, grace and agility. The thorough-breeds, on the contrary, are a shuffling, daisy-cutting race, and had been found so in Pennsylvania, Virginia, Kentucky, and some other States. Proof to this effect was cited from a medical man from one of the above-named States. Herbert once advocated thorough breeds, and he says they are poor on the road, and are not designed as trotters. The speaker said they had not the element or power of trotting well, but the American horse is a trotting horse, and has the proper mechanism for it, also for the farm. On the track it had been said that Patchen was a thorough-breed; and some said Trustee was, for whom it was claimed that he could trot twenty miles in an hour. The old Messenger in Maine was no trotter, hardly making five miles the hour. Flora Temple, however, was unquestionably a Yankee horse, with no thorough blood; and Ethan Allen, Black Hawk and Lady Suffolk, though all great trotters, are equally good for the New England farm. Dr. O. W. Holmes the speaker observed, would as soon breed *dice boxes* as thorough breeds. In a visit to Vermont to see its cattle, Dr. L. said he found a horse at work in a cider-mill. The owner wanted to sell him, and taking a ride together, he went twelve miles an hour easily. He was a mixture of the Morgan and Norman blood, between 700 or 800 in weight, and the speaker bought him, and finds him good on the road for ten miles an hour, Horses like this we cannot find in the other States, or out of New England. Here is the place for the farmer to purchase, and he should not trouble himself about importations, for we have a consolidated stock unsurpassed, if not unequalled.

Mr. WETHERELL said farmers had a deep interest in this subject. On the whole, horse-breeding does not pay. Stonehenge said breeding was like a lottery—it being rare that you got a good animal. Of thorough breeds, if they are not good, how many of the Black Hawks are poor trotters? The best trotters have no Morgan blood in them. As to the term *indigenous*, he did not understand it. [Dr. Loring explained as to their domestic identity.] But neither our horses or cattle are indigenous; they all came from abroad. He did not like the discarding of thorough breeds. What are the best looking and most dignified horses? Look at the Arabian. Some say the horse is from Egypt, or Africa; but he thought he was from Asia. These horses had improved the English, and they were thorough breeds. If the thorough breed is no better than had been stated, then the rules in regard to breeding cattle are set at naught. The Arabian breeds only from his own best stock, and his horses are kept in a pure state. Mr. W. advocated thorough breeds, and was surprised that they should be so taken down. Stonehenge says that 300 thorough-bred stallions had been imported here, and the Morgan and Black Hawk races would have been worthless without their blood. The osteological mechanism is the same for trotting as for racing. Flora Temple and Lady Suf-

folk were no doubt of large thorough blood, and the effect of Morgan on his stock is also proof of this. He spoke of the natural gait of the horse, which was a canter. When a horse is made to trot he goes diagonally, two feet up at once, and then changes. Flora Temple sometimes had no foot on the ground. She earned $50,000. He gave her pedigree. Good thorough blood was on both sides. [Dr. Loring said Lancet beat her.] Mr. W. replied that horses win that are *made to*. Trustee was three-fourths thorough-blood, and Bob Logic, a thorough-bred stallion, could also trot his 20 miles an hour. Shaw's Balrownie, look at him, how fine! In fact, the thorough-bred horse is to the farmer of the utmost importance. Mr. Alexander, of Kentucky, is trying to raise some for trotters, or for roadsters.

Education has much to do with the horse, as he can be taught to trot, run or amble. Our Puritan forefathers religiously opposed race horses, but learned their own to trot. If the farmer would improve his horses, let him take thorough breeds —breeding from the best, as in cattle.

Dr. LORING inquired of the last speaker, if he didn't understand him to say that "no Morgan or Black Hawk blood was found in a good trotter?"

Mr. WETHERELL admitted that the Morgan can trot pretty well, even good. He said, when up before, that the *best* trotters have no Morgan blood in them.

Dr. LORING wanted to show that we have a roadster that had developed the best stock of horses. He thought we had got ahead of thorough-breeds. We have a farming and travelling horse which is capable of transmitting his formation, and this has been encouraged.

Mr. WETHERELL responded, and observed that he advocated the Morgan, and that these horses were excellent *because of their thorough blood.*

Mr. HOWARD, of the *Boston Cultivator,* said the great question is, "What are the best traits of the horse?" The thorough-breed in England is a runner and nothing else. The term "thorough-breed" is liable to mislead. It was one of convenience. The so-called thorough-breed is much mixed by the Spanish, the Persian, the Arabian and the English stock. "Thorough-breed" is indefinite—a clap-trap. Let us look at the mechanism of the English horse. He is not so good as some others. The Morgan is different in conformation from the race horse. If the Morgan is full blood, let it be shown. Will the colts of Mr. Alexander become good trotters by breeding? He owned the Lexington, and no one would change a farm horse for him. Mr. A. was a breeder of horses for the turf; shall we breed from such, or introduce the foreign? Let us see if good trotters can spring from Balrownie. In this matter we should not forget fundamental principles.

Mr. WETHERELL asked if there was any difference in the shoulders of Flora Temple and Lexington.

Mr. HOWARD replied that the *scapula* is not so long in Lexington.

Dr. LORING here gave a description of the *scapula* and *humerus* of the horse, showing the difference between those of the racer and the trotter.

Hon. AMASA WALKER, of North Brookfield, spoke of the effect of climate on men and animals. We have horses fitted to our country and circumstances, yet some foreign stock may be well. Four similar horses placed in different parts of the world would all become different. We have, however, in New England, the best horses known; they are Yankee, like the population. The Morgan horse was a Yankee horse, and his influence on his progeny was marked. He is well adapted to us and our wants.

Mr. N. RICHARDSON, of Winchester, spoke at some length upon the subject, and thought that if foreign blood, or thorough blood, was useful, it was to give greater endurance to our horses. He alluded to many of our fast trotters, and thought that colts should be fed well the first year, and not forced much afterwards. We should be careful, also, not to overdo our horses.

Mr. STEDMAN, of Chicopee, thought that by introducing thorough-breeds we should be much disappointed, and concurred with the chairman. The Morgan was the best for New England, and he believed he had not much thorough blood in him.

Mr. WALKER again alluded to the power of the Morgan horse of transmitting himself. He has a mare which is said to be a *fac simile* of the old Morgan.

The subject for the next discussion was now announced—*How can our Agricultural Exhibitions be made most beneficial to the interests of the Commonwealth?*

HOW THE CHINESE MAKE DWARF TREES.

We have all known from childhood how the Chinese cramp their women's feet, and so manage to make them "keepers at home;" but how they contrive to grow miniature pines and oaks in flower pots for half a century, has always been much of a secret. It is the product chiefly of skilful, long-continued root pruning. They aim, first and last, at the seat of vigorous growth, endeavoring to weaken it as far as may consist with the preservation of life. They begin at the beginning. Taking a young plant (say a seedling or cutting of a cedar,) when only two or three inches high, they cut off its tap-root as soon as it has other rootlets enough to live upon, and re-plant it in a shallow earthern pot or pan. The end of the tap-root is generally made to rest on the bottom of the pan, or on a flat stone within it. Alluvial clay is then

put into the pot, much of it in bits the size of beans, and just enough in kind and quantity to furnish a scanty nourishment in the plant. Water enough is given to keep it in growth, but not enough to excite a vigorous habit. So, likewise, in the application of light and heat.

As the Chinese pride themselves also on the shape of their miniature trees, they use strings, wires and pegs, and various other mechanical contrivances, to promote symmetry of habit, or to fashion their pets into odd fancy figures. Thus by the use of very shallow pots, the growth of the tap-root is out of the question; by the use of poor soil, and little of it, and little water, strong growth is prevented. Then, too, the top and side roots being within easy reach of the gardener, are shortened by the pruning-knife, or seared with his hot iron. So the little tree, finding itself headed on every side, gives up the idea of strong growth, asking only for life, and just growth enough to live and look well. Accordingly, each new set of leaves becomes more and more stunted, the buds and rootlets are diminished in proportion, and at length a balance is established between every part of the tree, making it a dwarf in all respects. In some kinds of trees this end is reached in three or four years; in others, ten or fifteen years are necessary. Such is fancy horticulture among the Celestials.—*Scottish Farmer.*

For the New England Farmer.

QUALITY AND QUANTITY OF SEED.

MR. EDITOR:—This is an important subject, and deserves the attention and careful consideration of every farmer. No one can be a successful farmer who is careless or indifferent about the *quality* or the *quantity* of the seed he uses. The subject is twofold, implying good seed, and a sufficient quantity. On this subject, there is a great diversity of opinion and practice. Some appear to be quite indifferent with regard to the *quality* of their seed, whether it be good, plump, ripe seed of the right kind, or directly the opposite, poor, shrivelled, unripe seed of a worthless character. They do not seem to care what the quality of their seed is, provided it will vegetate, and it does not cost them a high price. Others appear to be quite indifferent with regard to the *quantity* of seed they use, whether too much, or too little. In some instances, they use more than is necessary; and, in others, they do not use seed enough.

With regard to the *quality* of seed, but little need be said to put every one on his guard. It is not always easy to tell good seed from bad; but a discrimination ought always to be made; and bad seed should be rejected, or what, after examination, is thought to be bad. By bad seed I mean seed of doubtful appearance and character—seed wanting in vitality and vegetative power—and seed whose productions are of an inferior quality. All such seed should be carefully rejected; and none but good, bright, plump, perfect seed should be used. Good seed, the very best, is none too good, and is always the most profitable, because the most productive.

They who raise their own seed can easily tell the difference between good and bad seed; and if they continue to use poor seed, or poor kinds of seed, the fault and loss are their own. But they who purchase their seed at the country seed stores, have no certain means of telling whether the seed be good or bad, or of the right kind, but are obliged to rely on the honesty and fidelity of others; because the seed all comes done up in small papers, less than a table spoonful in each, and is sold at five cents a paper, which, at that price, ought to be good seed, but frequently turns out to be bad. In this case, the individual loss in money is not much, but the loss in labor in preparing and manuring the ground, and in sowing the seed, and the loss in time in waiting for the seed to vegetate, till it is too late to sow again, greatly increase the amount of loss. These remarks apply particularly to garden seeds, and, with certain limitations, to all other kinds of seed. The best, the earliest, the ripest should in every instance be selected; for it is a law in the vegetable, as well as in the animal kingdom, that "like produces like," so that, if we wish to secure the continuation of good crops, we must sow and plant good seed.

But other conditions are necessary to produce good crops beside the use of good seed of the right kind. There must be also a sufficient *quantity* of seed, neither too much, nor too little; and it should be used at the proper time, and in a proper manner. To tell exactly what this quantity is, in every instance, on different kinds of soil, and at different seasons of the year, whether sowed in the autumn or spring, early or late, is no easy matter. It is sufficient to say, that a less quantity of seed is required to sow an acre, when sowed early, than when sowed late, because the seed has more time to vegetate, to take root, to spread over the ground, and to put forth additional shoots. It is believed, that we do not generally sow enough seed of the cereal kinds, such as wheat, rye, oats and barley. We do not sow as much as the English do, and they always have the larger crop. It is very evident, that we do not sow grass seed enough, nor a sufficient variety of seed. This is especially the case on new land that has been recently cleared and burned over. If we do not sow enough seed on such land, the loss is very great; because the condition of the land is such that we cannot plow and sow again, but are obliged to let the land run to waste, on account of the stumps and roots.

The case is somewhat different in planting corn and potatoes, because we generally use too much seed. When we plant a large, but late kind of corn, we almost always use too much seed, and plant too near together; and the consequence is, that, in our climate, the corn does not get ripe before it is overtaken by the frost. The smaller and earlier kinds of corn may be planted nearer together, and with more kernels in a hill. In planting potatoes, we generally use too much seed, whether we plant the great or the small, the cut, or the uncut; and, as a natural consequence, we have a large crop of small vines and of small potatoes. This is especially the case, when we plant small potatoes without cutting, putting two or three in a hill. To obviate the necessity of using too much seed, I usually select the fairest and best potatoes, instead of the largest or smallest, and plant as early as our climate will admit. I cut the potatoes lengthwise, so as to divide the seed end, and put but one piece in a hill, a foot and a half apart. I always plant them with the cut side up, and throw on them a spoonful of ground plas-

ter, to preserve the life and vigor of the potato. The juice or nutriment of the potato is necessary to the support of the young plant. This the plaster absorbs and preserves as it exudes from the cut potatoes. I afterwards throw upon each hill a handful of ashes; and, at the time of hoeing, I throw upon the vines of each hill another spoonful of plaster. And without using any manure, I never fail to have good potatoes, and perfectly free from the rot, when I plant early enough. All the earlier kinds of potatoes escape the rot entirely, because the tops are all dead before the season of the rot arrives. JOHN GOLDSBURY.

Warwick, Feb., 1862.

For the New England Farmer.

JEFFERSON AT MONTICELLO.

BY JUDGE FRENCH.

A book of 138 octavo pages, with the above title, has just been published, under the authorship of Rev. Mr. PIERSON, President of Cumberland College, Kentucky. His materials, which are said to be entirely new, are derived mainly from Captain Bacon, who was Mr. Jefferson's "overseer" for about twenty years of the latter part of his life. Mr. Bacon's duty as "overseer" seems to have been that of a sort of steward, or general manager, to whom instructions were given as to the conduct of all the affairs of the establishment. We get from the volume an insight into President Jefferson's agricultural tastes and opinions, which we find very interesting. He gave to his farm affairs that minute and systematic attention which is essential to any satisfactory results, and which enabled him to accomplish so much in so many and various departments of business and science. "He always knew," says Mr. Bacon, "everything, in every part of his grounds and garden. He knew the name of every tree, and just where one was dead or missing." He wrote from Washington, while he was President, particular directions how every servant should be employed, and when he sent trees and shrubs, as he often did, to be planted about his place, he wrote instructions where each one should be set.

In a letter of November, 1807, he directs where to plant a great variety of trees. His heart was evidently at his home, and every part of the landscape was pictured in his mind. He writes thus: "*Four purple beeches.* In the clumps which are in the south-west and north-west angles of the house. There were four of those trees planted last spring, two in each clump. They all died, but the places will be known by the remains of the trees, or by the sticks marked No. IV. in the places. I wish those now sent, to be planted in the same places." "*Six Spitzenberg apple trees.* Plant them in the south-east orchard, in any place where apples have been planted and are dead."

The purple beech, let us say, is one of the most beautiful of trees, and why it is not more common, seeing that 55 years ago it was known and appreciated by Mr. Jefferson, is somewhat strange. We have seen them in England, from one to two feet in diameter, and much of the proportions of the common beech. It has, in localities near Boston, a somewhat peculiar habit of putting out its leaves irregularly, some branches being in full leaf, while others remain in the bud. If the tree is healthful, as we presume it to be, it is worthy of a place in all ornamental grounds.

MONTICELLO.

Capt. Bacon says, "Monticello is quite a high mountain, in the shape of a sugar loaf. A winding road led up to the mansion. On the very top of the mountain, the forest trees were cut down, and ten acres were cleared and levelled off."

The house stood on the very top. The grounds about it were beautifully ornamented with flowers and shrubbery, and laid out in walks. Back of the house was a lawn of two or three acres. The garden was on the hill-side, and full of all sorts of fruits, including grapes and figs. There were about 300 acres inclosed with the house, from which Mr. Jefferson never allowed a tree to be cut for use. Roads and walks were laid out winding through it, where the family amused themselves at pleasure. The whole estate comprised some ten thousand acres of land, too rough and uneven to be very profitable for cultivation, though finely adapted to fruit.

Among other things, he had a flouring-mill four stories high, and built of stone, with four run of stones, to which water was carried in a canal three-fourths of a mile. He had also a nail factory, where he worked ten hands to good profit, at two fires, supplying all the neighborhood with nails. The flouring-mill was unprofitable, but a great accommodation to the country around. He had also a factory for making cotton cloth, in which were three spinning machines, running in all sixty spindles, where he manufactured much more cloth than was used by his family.

Jefferson was enterprising in all directions. When he wanted a new carriage, he set his men to work, and built it on the place, from a model that he planned himself. "The woodwork, blacksmithing and painting were all done by his own workmen. He had the plating done in Richmond." It is a pity the drawings are not preserved, for this carriage must have been a curiosity, or would be now, certainly. "When he travelled in this carriage," says Bacon, "he always had five horses, four in the carriage, and the fifth for Burwell, (a slave,) who always rode behind him. These five horses were Diomede, Brimmer, Tecumseh, Wellington and Eagle." Mr. Bacon says the new carriage and the fine blood-horses, with elegant

harnesses, made a splendid appearance. His horses were not driven with reins, but a postillion rode one of each pair, as the fashion now is in state carriages abroad.

LIVE STOCK.

Beside indulging, like most Virginia gentlemen, in a taste for fine horses, President Jefferson gave great attention to improvement in the breeds of cattle, sheep and swine. Mr. Bacon says the first full blood Merino sheep in all that country were imported by Mr. Jefferson, for himself and Mr. Madison, while the former was President. They were sent by water to Fredericksburg, but where they came from, we are not informed. Mr. Bacon's plan for getting up a flock would be worthy the genius of a Connecticut Yankee. He put a notice in a newspaper, that persons who wished to improve their stock, might send two ewes, which would be kept until their lambs were ready to wean, and then the owner might come and take one lamb, leaving the ewes and the other lamb. In this way, he says, "We got the greatest lot of sheep—more than we wanted—two or three hundred, I think—and in a few years we had an immense flock. People came long distances to buy our full blood sheep. At first we sold them for fifty dollars, but they soon fell to thirty and twenty, and before I left Mr. Jefferson, Merino sheep were so numerous, that they sold about as cheap as common ones." Mr. Jefferson imported from Barbary four broad tailed sheep; but although they made good mutton, they were not liked, and ran out in a few years.

He and Mr. Madison imported also some swine, called by the name of Calcutta hogs, which Mr. Bacon describes as being black on the head and rump, and white listed round the body. They were very long bodied, with short legs; would live on grazing. He says, "They would not root much more than an ox. With common pasturage, they would weigh 200 at a year old, and fed with corn, and well treated, they would weigh 300 or 400." The object of Mr. Jefferson was to scatter his improved breeds for the benefit of the country; but his "overseer" seems to have wisely judged, that what is lightly won is lightly prized, and he devised a plan by which he increased his herds of swine as well as his flocks of sheep. "I told the people," he says, "to bring three sows, and when they came for them, they might take two and leave one. In this way, we soon got a large number of hogs, and the stock was scattered over that whole country."

Jefferson never imported any cattle during the twenty years included in this account, but "could always procure remarkably fine cattle from Western Virginia." In one of his letters from Washington, he speaks of divers valuables in the way of plants, &c., sent by his servant Davy, and adds, "He brings a couple of Guinea pigs, which I wish you to take great care of, as I propose to get this kind into the place of those we have now, as I greatly prefer their size and form." The animal now known as the Guinea pig is not of the swine genus, and whether Mr. Jefferson referred to it, or to something else, or was under a misapprehension as to what a Guinea pig is, is not quite certain.

Jefferson was very particular in making his cider. In one of his letters, he speaks of his apples. "They are now mellow and beginning to rot. Let them be made clean, one by one, and all the rotten ones thrown away, or the rot cut out. Nothing else can ensure good cider."

HIS SLAVES.

Mr. Bacon says, "No servants ever had a kinder master than Mr. Jefferson's. He did not like slavery. I have heard him talk a great deal about it. He thought it a bad system. I have heard him prophesy that we should have just such trouble with it, as we are having now." Capt. Bacon is a stanch Union man, utterly opposed to the whole secession movement, and seems to see, as many of us farther North do, the true origin of the rebellion. Some of the necessary fruits of the system of slavery, appear in this narrative. Gov. Thomas M. Randolph, who married one of Jefferson's daughters, was much embarrassed for money, at times, and in order to raise what he required, "when he must have it, and could get it in no other way, he would be obliged to sell some of his negroes." On the 16th of May, 1819, he sold to this same Mr. Bacon a little girl four years old, described as "Edy, daughter of Fennel," for $200, in order to meet a payment of $150, to the United States Bank. Mr. Jefferson, while President, sent for Mr. Bacon to come to the White House and take two of his servants, husband and wife, who were quarrelsome, to Alexandria, and sell them, but they begged and promised so hard, that the President relented and kept them. He gave several of his favorite slaves their freedom by his will, and would have freed them all, but was so embarrassed by a loss of $20,000, as surety for a friend, and by the imposition of everybody upon his hospitality, that he could not well do it. On the whole, we find our favorable impression of Jefferson, as a large-hearted, progressive, considerate, unselfish, kindly natured man, confirmed by this volume. It has nothing to do with his opinions, political or religious, but gives us an agreeable sketch of the philosopher and statesman at home, most beloved and revered by those who knew him best. There is no position where a great man appears more truly noble, than at the head of his family, on his own homestead.

For the New England Farmer.

A CHAPTER ON ROSES.

BY E. W. BUSWELL.

"Then, then, in strange eventful hour,
The Earth produced an infant flower,
Which sprang with blushing tinctures drest,
And wanton'd o'er its parent breast.
The gods beheld this brilliant birth,
And hailed the Rose—the boon of Earth."

This universal favorite has been a theme with the poets of all ages, in all countries, and mythological writers have loved to dwell upon its charms. It was dedicated by the Greeks to Aurora as an emblem of youth, to Venus as an emblem of love and beauty, to Cupid as an emblem of fugacity and danger. By Cupid it was given to Harpocrates, the god of silence, as a bribe, to prevent him from betraying the amours of Venus; and as an emblem of silence, it was sculptured on the ceilings of drinking and feasting rooms as a warning to guests that what was said in moments of conviviality was not to be repeated. Hence the term "*sub rosa.*"

One fable of its birth is, that Flora having found the dead body of one of her favorite nymphs, whose beauty was equalled only by her virtue, implored the assistance of all the gods and goddesses to aid her in changing it into a flower which all other flowers should acknowledge to be their queen. Apollo lent the vivifying power of his beams, Bacchus bathed it in nectar, Vertumnus gave it perfume, Pomona fruit, and Flora herself a diadem of flowers.

The Greek poets say that the rose was originally white, and was changed to red by the blood of Venus, who lacerated her feet by its thorns when rushing to the aid of Adonis.

Its fragrance is said to be derived from a cup of nectar thrown over it by Cupid; and its thorns to be the stings of bees with which the arc of his bow was strung. Now, perhaps, some will be so sceptical as to disbelieve this agency of the gods in its origin, yet none will deny that

"The hand that made it is Divine."

The real history of the rose dates back to the time of the earliest writers of antiquity. Herodotus speaks of the double rose, Solomon, of the rose of Sharon, and the plantations of roses at Jericho. Theophrastus of the hundred-leaved roses of Mount Pangaeus, and it appears that the Isle of Rhoda (Isle of Roses,) received its name from the culture of roses carried on there. The Romans attained to a high degree of perfection in its cultivation, and in their writings frequent allusion is made to its virtues in such terms as to show that they almost held it in sacred estimation. From the time of the Romans, down to the time when botany became a science, its history is but little known, yet enough to show that through those dark ages it was highly prized by all. Thence to the present time, its history is well defined.

Its great desirableness has led to an almost endless increase of varieties by hybridization, and very considerable works upon its cultivation are current. It is chiefly cultivated as a floriferous shrub wherever grown; yet in Europe, Asia and the north of Africa it not only pleases the senses of sight and smell, but it has become an article of commerce in the various preparations from its flowers, used in medicine and domestic economy. These are the dried petals, rose-water, vinegar of roses, spirit of roses, honey of roses, conserve of roses, oil of roses, and attar, otto, butter or essence of roses. A description of their mode of preparation would occupy too much space for this article.

Pre-eminently the queen of flowers, it is not excelled by any of the many floral candidates for our favor, and is found in greater or less variety in every well-ordered garden, where, if the selection has been carefully made and the plants properly treated, they will give, even in open culture, a "round of pleasure" from early in June to freezing weather. To secure this end, books or descriptive catalogues should be consulted for the varieties, and as there seems to be a lack of general knowledge on the mode of cultivation, a few practical hints, condensed from "book farming" and "founded on facts," may be of some service to those who have, summer after summer, almost with tears in their eyes, witnessed the blasting of their hopes and roses together.

First, then, come *soil* and *situation.* The rose will grow in almost any common garden soil, but to thrive well, it should have a soil naturally light and free, and well enriched; in an open and airy situation, but little shaded, if at all, and not under the drip of trees.

In planting, many persons think it only necessary to dig a hole and bury the roots; but to secure a good growth, care should be had in pruning *root* and *top*, to leave no mutilated part, and place the roots in their proper positions, leaving no cavity under them, but fill well with fine mould, and press it down lightly.

Of Pruning.—As the rose blossoms on new wood, it is desirable to have that of vigorous growth. Hence it is necessary to cut out freely the weak shoots, and cut back well the stronger ones, so as to induce the lower eyes to push. This applies to dwarf or shrub roses, and not to standards or to climbers. Pillar or trellis roses usually require only the oldest wood cut away, and a judicious heading in. The time for pruning is in early spring, when the sap is beginning to move. If it is desirable to retard the bloom of the perpetual or remontant varieties, it may be done by pinching off the earlier blossom buds.

Insects.—Of the many insects injurious to the rose, are the aphides, commonly called plant lice, or green flies, frequently found in large numbers on the tender shoots and sapping the very life of the plant, and were it not for the aid of the ladybird, which is said to destroy them in large numbers, and of the small singing birds, the careless gardener might find his bushes soon ruined.

"Reaumur has calculated that in five generations one *aphis rosæ* may be the progenitor of 3,904,900,000 descendants, and in ordinary seasons, ten generations are produced."

Another and more destructive insect is the rose saw-fly, *Selandria Rosæ*, whose young is the rose slug, a small "green monster," a third of an inch in length with a dark stripe through the middle, found lying flat upon the upper surface of the leaf, and eating away the substance, leaves only the veins and lower surface to die and turn brown, thus robbing the plant of its lungs, and giving it the appearance of having been scorched. Their ravages commence with the lower leaves soon after they are formed, and working upward with rapid increase of numbers, they soon destroy the

vitality of the most vigorous plants. Another ugly customer is the rose-bug, *melolontha subspinosa*, a real "hard shell." With his long snout he is a regular bore, pitching into the flower and in a very short time destroying its beauty. Preferring as he does the white flowers, he is often found in a trap. The various spireas, and especially the Siberian, and also the Valeriana phu are favorite resorts of his, and if taken before he is off his perch in the morning (he rises with the sun) he may be treated "hydropathically" with marked success, by simply holding a dish of *cold* water under him and make an "advance." He at once keels off, expecting no doubt to *land* anywhere but in water, and being chilled, cannot crawl out and fly away. A few mornings' hunting will very sensibly diminish their numbers. The remedy for the two first named is also hydropathic, but differently administered, and is also a remedy for nearly all the other and minor troubles of the rose. It consists of a solution of whale oil soap, at the rate of one pound to seven gallons of water. This is found to be of sufficient strength to destroy all insect life except hard shells, and will not injure the foliage. The best way is to dissolve it in boiling water, and then dilute to the proper strength, strain it to take out foreign substances and insure thorough solution, and apply with a garden syringe near or after sunset, being careful to thoroughly wet the foliage on both upper and under sides. If applied with sufficient force to knock the enemy off, so much the better. The plants may be syringed with clear water in the morning, but it is not very important. By commencing this process soon after the opening of the leaf buds, and following it up at intervals of four or five days, until the blossoms unfold, a healthy foliage may be maintained, without which no plant can thrive.

To protect from winter-killing, hill up late in the autumn with old manure, and shade with evergreen boughs.

Let no one think these operations too troublesome, but remember that if flowers are worth having, they are worth caring for, and also that if "eternal vigilance is the price of liberty," so it may be of flowers; and as the fond mother feels the strongest attachment to that child whose tender years have caused her the most solicitude, so shall those flowers that require at our hands the most care and watchfulness reward us with a proportionate meed of pleasure. I append a list of a few varieties generally approved:

George the Fourth.	Jaques Lafille.
Angustie Mie.	Count Beaumont.
Baronne Provost.	Madam Plantier.
Giant des Battelle.	Madam Laffay.
La Reine.	Cristata.
Leon des Combats.	FOR CLIMBERS.
Prince Albert.	Prairie Queen.
Souvenir Levisson Gower.	Boursault.
Pius IX.	Baltimore Belle.

A HUNDRED EGGS FROM A PYTHON.—In the Zoological Gardens at London they have had a large serpent of the Python species, from the West Coast of Africa, for many years. This reptile is nineteen feet long and twenty inches in circumference. About three years ago another snake of the same kind was introduced to its den, and they have lived together ever since. On the morning of the 12th of January the men in charge of that department were much surprised to find that the larger serpent had laid about a hundred eggs as large as those of a goose. The skin of the eggs was tough and leathery, their color, dirty yellow. When first seen the eggs were in a heap, but the serpent laid them all on a level, and then coiled her body over them. During the week after she laid them, the serpent came off them twice for short periods. She is covered with a blanket while thus upon her eggs, and has not fed for the last twenty-one weeks. This interesting fact establishes the fact that this species of serpent hatches her young by incubation, and it is believed that she will bring some snakes from the great nest of eggs she has laid.

SQUASHES AMONG POTATOES.

It has been generally supposed by farmers that in order to raise good squashes, they must be planted on ground specially prepared for them, and then cultivated with great tenderness and care. A piece of rich land is usually selected, plowed and thoroughly pulverized and manured, and the squash seeds planted in raised hills. In this way they are cultivated in masses, and hold out the most tempting invitation to all the bugs in the neighborhood to come and feed upon them. Under these circumstances the utmost vigilance is necessary to preserve even one plant from destruction,—and those that remain with the breath of life in them, are generally so disfigured and poisoned as to require about half of the growing season to recover from such blighting influences.

Attended with all this labor of the preparation of the soil, and the subsequent care which the squash yard requires, it is rarely the case that squashes do not cost the farmer altogether too much.

There is a cheaper and better way of raising this delicious and wholesome article of food. It may be common to others, but it came to our knowledge through the necessity of finding some more certain way of obtaining a crop than by the "squash yard" process. Several experiments were made, and among them one has resulted in giving us the greatest abundance of excellent squashes, almost without cost.

We plant our field potatoes in hills at a distance of three by three and a half feet apart, and dress these hills or holes, with strawy, unfermented manure. Into these hills we drop occasionally a squash seed with the potato—but these are intended for *early use*—for the young *Marrow* or *Hubbard* squash is as delicious as the true *Summer* squash. At the first hoeing, seeds are pushed into the potato hills, pretty near the potato plants, where the plants are slightly sheltered while young and tender, and soon begin to stretch away into the open spaces between the rows and hills, and grow with great vigor and luxuriance. All our *hilling* of the potato is done at the first hoeing. The cultivator is passed through the rows

afterwards, and all weeds kept down, but all this occurs before the squash vines have extended themselves so as to be in the way.

By this mode of cultivating the squash, few plants are injured by bugs, the crop is secured at a most trifling cost, and it has invariably been a good one. The vines should never be so close as to run into each other—not nearer than two or three rods. Those who try this plan will be quite certain to abandon "squash yards," and to have at harvest time as many high-flavored and excellent squashes as they desire. A dozen or two of squash seeds planted in an acre of corn, will be likely to produce similar results—but they should be six or eight rods apart.

EXTRACTS AND REPLIES.

THE BAROMETER.

I wish to make some inquiry about barometers. Are they to be depended on at all times, or do they, like signs in dry weather, sometimes fail? One of my neighbors has Timby's Barometer, (manufactured by John M. Mirick & Co., Worcester, Mass.,) and he speaks highly in praise of it. He thinks it a great help to the farmer, and he informs me he never knew it prove false; often giving him notice of a storm some twenty-four hours ahead.

Now, Mr. Editor, I want your opinion as to whether the barometer is indeed useful to the farmer? If so, I want one—if not, I do not wish to throw away my money. Are there any rules laid down to help one who is unacquainted with the machine? If so, please give them, and you will greatly oblige one, if not many SUBSCRIBERS.

Cornwall, Vt., March, 1862.

REMARKS.—On pages 16, 395 and 518 of the monthly *Farmer* for 1861, may be found articles on the use and value of the barometer; and on pages 159 and 470, of the volume for 1860, other articles containing about all we know of the value and working of the instrument. We have no doubt it may be made valuable to the farmer who will learn to understand it.

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A FERTILIZER FOR BEANS.

Will you please inform me in your next your opinion respecting the best fertilizer in the market for white beans? I have about 5 acres of upland connected with a pasture of some 70 acres. It is my intention at some day to bring it into mowing. Being away from my house, and not being able to put on barn-yard manure, I take this liberty to ask your opinion as to what quantity to put in the hill?

The land is quite rich from the droppings of the cattle, as they made a practice of sleeping upon it nights, as it was the most sheltered.

Salem, April, 1862. B. DRINKWATER.

REMARKS.—We do not know what "the *best* fertilizer in the market is for beans." We have used American guano and Coe's superphosphate of lime, and had large crops, but the land had been dressed, broadcast, with barn manure. We have never planted any considerable piece of land, without manuring. The specific fertilizers are used as auxiliaries. On the land you mention, however, should think that, with light plowing and finely pulverizing the surface, you may raise a good crop of beans with the help of either of the fertilizers mentioned above.

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HOW TO DESTROY WARTS.

A subscriber wishes information with regard to killing warts on cows' teats. I will give a receipt which is effectual as well as simple: take fresh butter (unsalted) add an equal amount of sharp vinegar; simmer together and apply with a brush, cloth or hand. It will kill them so effectually that they will drop off in a few days! Warts on cattle, however large, may be removed by this process, without injury.

I have tried the above, and seen it tried to my satisfaction. One of my neighbors had a heifer which had a wart on her neck which must have weighed eight or ten pounds tried the above receipt, and in about one week the wart dropped off without the least injury to the heifer. Two or three applications is generally sufficient.

STEVENS LAWRENCE, JR.

St. Albans Bay, Vt., March 24, 1862.

REMARKS.—Excellent, because so simple, and divested of all danger to the animal. Colts are troubled with warts, and the same remedy would probably be equally effective with them. The same application may remove warts on the hands of children or adults. Try it and see.

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LEGHORN FOWLS.

In the *Farmer* of March 22, I notice an article written by Mr. H. T. Gates, of New Worcester, in regard to Leghorn fowls. Will Mr. Gates be kind enough to give to the readers of the *Farmer* more information on the subject.

1. In what paper did a man speak highly of a large flock of fowls?
2. Who was the author of the piece he saw in the paper?
3. Who was the gentleman of Worcester city that purchased the six fowls?

Justice demands a reply to the above.

Millville, March, 1862. SUBSCRIBER.

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THOROUGH-BRED HORSES.

There is a good deal said in many articles that I read, written on the horse, about thorough-bred or pure blood horses. Will you, or some of your numerous readers, inform me how to breed a thorough-bred horse, or a horse with pure blood?

March, 1862. J. W.

GARDEN FRUITS.—Strawberries do well on a rich, dry, but deep soil. On banks that are not too poor or dry, they seldom fail to do well, and are often three weeks earlier than when on level soil. The blackberry also will do on a dry, rich bank. We mention this as there are often such spots in small gardens which it is desirable to rea-

der useful. *Strawberries seldom do well in low, wet ground.* Raspberries and gooseberries do better there.

In planting raspberries, they should be cut down nearly to the ground when planted. You lose the crop, of course, but you get good strong canes for next year. If you leave the canes long enough to bear, it will probably be the only crop you will ever get from them. *Never expect anything to bear the year after transplanting.* It is generally at the expense of the future health of the tree.

Grapes that have become weak from age may be renewed by layering down a branch some feet just under the surface, and then cut back, so that one good eye only be left at the surface of the soil.

OUR MECHANICAL PRODUCTIVENESS.

The work of preparing the statistics of the last national census for publication has so far progressed, as to afford valuable information to the Committee on Ways and Means, and the Treasury Department, in preparing a tax bill. The different branches of manufacturing industry have expanded marvelously since the census of 1850. In that census the cotton manufacturers were set down at $65,500,687. The returns from New England alone in 1860 amount to $79,000,000. The woolen goods of the United States were estimated at $39,848,557, but New England alone in 1860 returns the value of woolen goods at $32,000,000. In boots and shoes the census of 1850 for the whole United States returned only $53,967,408; Massachusetts alone in 1860 estimates her production in this branch of industry at $46,060,000. Philadelphia returns nearly $6,000,000. The production of pig, bar, railroad and rolled iron, which in 1850 was of the value of $30,823,374, in 1860 has reached $62,055,000, having doubled in ten years. The malt liquors produced in 1850 were valued at $5,728,508. In 1860 the amount is 3,235,000 barrels, valued at $18,000,000, or more than three times greater. The spirituous liquors in 1850 were valued at $15,770,240; in 1860 the production is 86,000,000 gallons, vauled at $23,500,000. The value of the products of industry of all branches in 1850 was computed at $1,019,106,616. In 1860 it will reach $1,900,000,000, or an increase of about eighty-seven per cent! The greatest increase since 1850 is in agricultural implements, iron, malt liquors, machinery, clothing, cotton goods, refined sugar, gold mining, &c.

HOW MIST IS GENERATED.

The production of mist is the subject of a note by the veteran Dr. John Davy (brother of Humphrey) in the Edinburgh *Philosophical Journal.* The cause usually assigned for mist is the access of cold air and its admixture with warmer air, saturated, or nearly saturated, with moisture (such as that resting on the surface of large bodies of water,) and strikingly exemplified in our autumnal and winter fogs, when the water, owing to the heat absorbed during summer, is of a higher temperature than the inflowing air. Dr. Davy, however, refers to another cause, not so much noticed, viz., a mild moist air coming in contact with a cooler air, equally humid, resting on cold surfaces, whether of land or water, about the end of winter or beginning of spring. He describes mists which he considers to have been thus formed in the lake district of Cumberland. To a similar cause, also, he refers the phenomenon termed sweating, which is the precipitation of moisture on walls and flagged floors excluded from the influence of fire. He also attributes to a warm south wind succeeding to a cold north wind, the deposition of a large quantity of moisture in the gallery of a nobleman in Devonshire, and quotes the saying in Homer, 'The south wind wraps the mountain top in mist."

LOOK OUT FOR YOUR FRUIT TREES!

We have seen sad havoc among shrubbery and fruit trees, this spring, by mice, and have heard of it from various directions. These little creatures have been cut off from their usual resources in a great degree by the ice which has covered the ground for several weeks past. This has completely shut them out from the low shrubs and grass roots, and in order to preserve life they have been compelled to go to the stems of our cultivated shubbery and fruit trees. In some cases, we have heard of great damage done to apple trees, where they are of eight or ten years' growth. If such trees are gnawed mostly, or entirely, around their stems, they will be likely to die, unless they receive immediate attention—and the loss and disappointment will be severe. But skilful and patient hands may save many, by attending to them at once.

The first thing to be done is, to visit each tree, and, wherever it is mutilated, cover the wounded part with a cloth or something else, so that it shall not become dry. The bark should be kept fresh and succulent until scions can be cut and placed vertically between the lower and upper portions of the wound; then take scions from any vigorous tree of the same family, and with a sharp knife make a slanting cut of a half inch or more at each end, but on the same side, raise the bark on the edge of the wound a little, and place the scion in so that it will pass under the bark at each end about an eighth to a quarter of an inch. The slanting cut will then rest on the alburnum or sap wood that has been laid bare. The scions should be set within an inch of each other as far as the wood is laid bare, and nearer still would be better. A piece of bass matting, or if that is not at hand, some soft twine or narrow strips of cloth should be tied over the ends of the scions to prevent them from moving, as a trifling misplacement would be likely to prevent their taking. When this has been done, the whole should be covered with a plaster composed of equal parts of cow manure and clay, thoroughly mixed, and this kept from being washed off by rains by a cloth or matting tied over the whole.

This may seem a tedious process, but it will be found to be much more rapidly done than one supposes, until he engages in it. At any rate, if a

tree of eight or ten years' growth can be saved in this way, it is well worth the trouble to do it. Mr. JOHN GORDON, of Brighton, informs us that he has taken this course with some of his fine pear trees that were injured by mice, and with entire success. If they are gnawed quite low down, a banking of earth about the stem after the plaster is applied, may be sufficient.

LEGISLATIVE AGRICULTURAL SOCIETY.

REPORTED FOR THE FARMER BY D. W. LOTHROP.

The thirteenth meeting of the series was held on Monday evening last, at the State House, the subject for discussion being—*How can our Agricultural Exhibitions be made most beneficial to the industrial interests of the Commonwealth?* Mr. FLINT, Secretary of the State Agricultural Board, was appointed to the chair.

He said the question in substance inquired, how we can make our agricultural societies more useful. He had observed that they are inclined to fall into a common routine in conducting their affairs; though when new they were more active, more interest was felt in them, and they did more good. They were doing much good now, however, but not so much as they might. He thought there should be one or two members of the County Societies in each town, whose duty it should be to report to the society any new facts or ideas that might be worthy of its consideration, as affecting its exhibitions. It would excite a wider and more general interest. Heretofore, complaints had been made that persons in the same town had taken certain premiums from year to year, and it was a matter worthy of attention and correction. The publications of the transactions of the County Societies, the chairman thought, should be more general—not merely published in a newspaper, but carefully prepared in a pamphlet form, and distributed among farmers, to an extent, who were not members. Some of the societies had done well in this respect—witness the Essex, the Worcester North, and some others. Mere display and amusement for a day should not be their prime object. The speaker would also throw out as a suggestion that the County Societies should have a fund for the purchase of agricultural implements, to be distributed among its members for trial, as many farmers have not much knowledge of them. They should also own some grounds, he thought, for experiments—the raising of seeds, for instance, as great loss is sustained by those which are worthless. Yet he did not know that it could be satisfactorily done. Another point, was their purchase and keeping of stock. He alluded particularly to the County of Dukes, Martha's Vineyard, of three towns, whose society received $600 State bounty. If some good South Down bucks were purchased, giving two or three to a town, the best ewes saved and the grade males castrated, in five years the value of sheep would be increased fifty per cent. So of Ayrshire bulls. In five or ten years the whole stock of the County would be remodelled. The Island of Jersey has so bred from its own stock, and kept it pure. The plan was feasible, he thought, but he presented these ideas, not as authoritative, but merely as suggestive.

Mr. SHELDON, of Wilmington, thought that premiums should be given to the best cattle of mixed herds, and not to those of particular breeds. Unless all cattle were allowed to compete together, he did not see how we could get at a true idea of their worth. More good, he thought, could be done so in five years than in twenty on the usual plan of separation. If crossing is not worth a premium, then we should not cross. He also spoke of premiums for plowing, and thought that the use of four oxen should be encouraged, as they could be trained to work well together.

Dr. LORING, of Salem, thought the County Societies were doing much good, as they occupy the place of agricultural schools. The best knowledge is from the farmers of real practice. They know all about cattle, sheep, horses, fruit, crops, &c., and are the men who constitute our agricultural societies—all of which are educational institutions. They give a stimulus and ambition which reaches the farmers' wives and daughters. Our exhibitions are not mere holiday affairs, but a means of imparting real knowledge. Those countries which have done the most for agriculture have the most important exhibitions. The school at Cirencester, in England, was found too dear for the common farmer, and it was the Royal Agricultural Society which gave the stimulus, and was in fact more important than all the schools of the kingdom. So, of the State Society of New York, and also of ours, with its numerous branches. In our agricultural reports the farmer finds the best literature extant on the subjects treated. The writers do not proceed upon theory, but give figures and facts. He alluded to the broad, fundamental basis of agriculture in the progress of civilization, and passed to consider the State Agricultural Society, which he defended from its aspersers, and said that as it kept watch of the interests of the farmer, it was an organization of which Massachusetts should be proud, and he was glad it had friends enough to keep its course clear.

Mr. WETHERELL alluded to the exhibition of a fine ram by Mr. Watson, of Pittsfield. He placed him under a tree, and invited his neighbors to come and see him. Afterward he exhibited other stock, This was before the formation of the old Massachusetts Society, and was the germ of agricultural exhibitions in this country. In regard to their utility and to their reports, he

thought farmers should be more careful in specifying facts rather than in dealing in general terms, as to manuring, crops, and other matters of farm operations. He made allusion to the State Board of Agriculture, and spoke in its praise.

Mr. HOWARD, of the *Boston Cultivator*, said the exhibitions of Great Britain were very different from ours, as they were not intended as objects of amusement. And ours should be no less so, and more for utility. He spoke of the origin of the old Agricultural Society of Scotland. In 1760, a few gentlemen held meetings in clubs, though under adverse circumstances, when each member was required at the next meeting to produce a plan for its enlargement and encouragement, and that influential association was the result.

Owing to the Legislature holding its session late in the Representatives' Hall, and the necessity of holding the agricultural meeting in a smaller room, and being late in its organization, the discussion was necessarily cut short. Some remarks were made in regard to holding another meeting, but it was finally voted to present the subject of *Underdraining* for another meeting, in case the Legislature should not adjourn, and there was no announcement to the contrary.

CORRECTION.—Mr. WETHERELL in stating objections to steaming feed, did not say that Mr. Peters is "abandoning the practice," as some have inferred from reading the report in the *Farmer* of the 29th ult.

RELATIVE HEAT OF COAL AND COKE.

Independently of this competition, there are a great many well-meaning people in this country, who labor under the impression that inasmuch as coke has already been partly burned, and deprived of its gas, it follows that it cannot produce so intense a heat as coal; but that the reverse of this is the fact has been proved by the best chemists. Dr. Henry, of Edinburgh, informs us that he has "learned that the heat produced by coke, when compared to that produced by coal, is at least three to two." Mr. Winsor, having made experiments with the same view, found that it required three bushels of coal to distil a given quantity of water, and only two bushels of coke. Being rather surprised than satisfied with this, he tried the same substances by combustion, with a certain measure of oxygen gas, but with a similar result. This set the matter at rest in England, so far as the relative heat was concerned; but then it was said that if coke made as hot a fire as coal, or hotter, at least the former was not as wholesome as the latter. This, too, the most learned chemists and physicians pronounced a gross error. Ever since, the demand for coke has been so great in all the large cities of England, that the gas manufacturers cannot produce sufficient gas to supply it. But in this country it is different. In spite of our innumerable free schools and armies of teachers, the old prejudice still prevails against coke; whereas, in point of fact, it is superior to coal in every property that ought to recommend it for family use, except the rapidity with which it burns. In other words, coal lasts longer than coke; and this is the only sense in which the former can be said to be superior to the latter.

For the New England Farmer.

MILKING.

Milking is the most disagreeable work on the farm; at least so think a large majority of the farmers in this vicinity. Before a person engages work for the season, he is very particular to inquire how many cows are kept? There is nothing, to be sure, very hard about it, but it is a kind of work that any one, however much he may be pleased with it at first, dislikes to do after a little experience.

Your city clerks like very much to come here in the country on vacation, and rusticate, and often the first thing that attracts their attention, is the cows, and they seem to think it must be very nice fun to milk. Upon making the acquaintance of a kicking cow, however, they soon change their tune, and it is not strange if you hear them denouncing, in the most emphatic terms, the whole farming business.

Some of your city people, and I doubt not some country people, too, would laugh at the idea of calling milking cows a *trade*, and yet it comes to very much the same thing, as every one must thoroughly learn the business before he can become a proficient.

We often speak of a person as being a good workman, and this might with just as much propriety, be said of one milking cows. There is as much difference between one person and another in this business as in any other. I have seen boys —yes, and men too—who had not a doubt that they knew as much about their work as anybody, bnt whom I would not employ under any circumstances, if I could possibly get along without. I am speaking now more particularly of those who might be appropriately termed the wasteful class. It makes a great difference in a cow's "holding out," whether she is "stripped" perfectly dry at each milking, or a little is allowed to be left in the bag. One of my neighbors told me that when he milked his cows himself, they each gave nearly a quart of milk a day more than they gave when he trusted it to his hired man. Great care should be taken to get every drop of milk; strip as long as any milk can be obtained.

Another important item is *neatness*. If people who buy their milk, should sometimes see it before it is strained, I fancy they would not quite as well relish their morning cup of coffee. At this time of year, when cows are mostly kept in the barn, they are very liable to get dirty, and the slovenly milker will be pretty sure to get something in his milk-pail which belongs in the barn-cellar. If a little pains be taken, this can all be avoided. Always keep an old brush or broom in the barn to brush the cows, and have a dish of water to wash their teats, and there will not be much danger of having dirty milk.

Kicking cows are very bad to manage. Not unfrequently the best cows for milk are very fond of exercising their legs while a person is milking,

and in this way a great deal of milk is wasted by the inexperienced milker. A person very naturally springs back when a cow attempts to kick, which is exactly what the cow wishes, for she can then have full liberty of her legs; and before you know it, the cow's foot is in the pail. Instead of springing back, sit up as near the cow as possible, keeping the pail—which should be between the knees—as high as it will bear. In this position, there is some danger of the cow's starting round suddenly, and tipping the milker over, unless the head be braced against the cow, so as to resist any such movement. Some recommend tying a cow's legs when she is fractious, putting a machine in her nose, &c, but this should never be resorted to except in extreme cases. Cross cows will generally become gentle by mild treatment. They will be coaxed, but you cannot drive them much easier than you can men.

Cows should always be milked as rapidly as possible. A slow milker dries them up. This is why a cow milked by a "green hand" gives such a small mess of milk. P. PAIGE.

South Hampton, N. H., April 1, 1862.

For the New England Farmer.

THE ROADSIDES OF THE FARM.

On passing a neighbor's the other day, I was forcibly reminded of the very descriptive words of the wise man in reference to the field of the slothful, and the vineyard of the man devoid of understanding, and of their applicability to most of the roadsides in every neighborhood. They are all grown over with thorns, nettles have covered the face thereof, and the stone wall thereof is broken down. The wise man considered it well; he looked upon it, and received instruction. Can we not do the same?

How many neglect entirely the roadside adjoining their premises, and how many more not only neglect the roadside, but their field side, and fences or walls. In numerous instances, I have seen walls and fences so overgrown with brush, briars, &c., that the owner, for years, probably had not had access to them. On some farms, acres are thus lost, so far as a profitable use is concerned, to their owners. These bushes and briars, unless vigorously combated, will encroach year by year upon the field. The only sure remedy seems to be to commence on the roadside, if the field is thus bounded, and make thorough work of them on both sides. I will ask you, whoever you may be, who have such roadside fences, if it never occurred to you, that every intelligent, observing passer by of your premises would look upon them with sorrow at their neglect, and regard you with pity as being either devoid of understanding, or wanting in good taste. Call to mind some farms we know of in our several neighborhoods, where we invariably see the fence corners piled with brush and briars; wall, if any, overrun with the same, and often broken down. Old carts, cart-wheels, plows and other farm implements, piles of wood, boards, barrels, and sometimes mulch of various kinds, (gathered in other places,) all commingled in the road, within a stone's cast from the front door of the house. Pigs, poultry, and often other farm stock, also allowed the largest liberty of the highway. Does such a state of things indicate prosperity? Would you not, if going to purchase a farm, pass such an one by, as being unworthy of your inspection? The farm, aside from its slovenly appearance, may be equally as good and productive as its neater neighbor, cultivated under the same circumstances. But who cares to assume the task of clearing up and putting such a place in order, unless it can be purchased very low?

This brings the question to bear where I wished in the outset, viz., that it is the interest of every farmer to keep the roadsides of his farm neat and clean.

Most men are moved by this motive, when all others fail. If you don't care much how things look about your premises, and the roads adjoining, depend upon it, there are dollars and cents involved in the matter that must be heeded, or you suffer loss. If you set to work in good earnest, to clear up the roadside borders of your farm, you will soon extend your operations to other parts, and not rest satisfied until the whole is put in a state of neatness. You will in all probability then discover that a spirit of improvement has somehow got hold of you, and that the farm not only looks better, but pays better. This, however, is not all the good you get. There is an undercurrent of feelings awakened that will gush up into living springs of enjoyment. You will feel your manhood as you never felt it before; new strength for the conflict of life, and greater self-respect; and be held in higher esteem by all who honor you, which will give to your example greater influence, and not only bless the present, but coming generations.

If such a state of things could be brought about, we should hear less of high taxes and hard times. Cheerful contentment would be found on every hand. The wise man passing by, would be pleased with the change, and instead of predicting poverty and want to come as a strong man armed, would regard you as being diligent to know the state of your flocks, and looking well to your herds; the hay and the grass appearing for the sustenance of the same; the lambs for thy clothing, and the products of thy fields and flocks for thy food, for the food of thy household, and for the maintenance of thy maidens. C. K.

Rochester, Mass., Dec., 1861.

For the New England Farmer.

CULTURE OF SWEET POTATOES.

MR. EDITOR:—Why are we, New England farmers, so far behind the times in the cultivation of the sweet potato? I know it is a prevalent opinion with many that it is a difficult task, it being apparently too far removed from its native climate. This opinion, I admit, would hold good against most of the many varieties grown at the South, but I am confident, from experience, that there are varieties that can be grown profitably throughout the New England States. All we want is a variety that will be edible at a very early stage of growth, cooking dry and good, when comparatively immature. A variety called the Nansemond, I think, possesses these merits, and has given good paying crops 44° north. A very short time since it was thought impossible to cultivate the purple egg plant with success, but we now find our cli-

mate and soil well suited for them, and where the egg plant can be grown, there is no doubt of success with the sweet potato.

Our farmers lack only knowledge and experience to enable them to successfully cultivate this valuable Southern crop. The method of growing the sweet potato is rather peculiar to itself; in this climate, the tubers must be sprouted in a hot-bed, and when the sprouts or plants are sufficiently grown, weather and soil suitable, they are separated from the potato, and planted in the field, as the seasons are not long enough to admit of their being grown in the field directly from the potato. Select a warm, southern exposure, of dry, mellow soil, plow a shallow furrow, put old, well decomposed manure in, and throw up a ridge two feet high over it, leaving the ridges three feet apart from the centre of each ridge; transplant the sprouts on the top 12 to 15 inches apart.

I think if our farmers who have suitable lands will but try, they will be amply paid by a profitable crop. I have raised from a later variety than the Nansemond from four to six quarts per hill "of three plants," and from the Nansemond potato I expect a much larger return.

Salem, April, 1862. JOHN S. IVES.

AGRICULTURE OF MASSACHUSETTS.

Through the polite attention of the Secretary of the *Massachusetts Board of Agriculture*, CHARLES L. FLINT, Esq., we have before us the ninth annual report of the Board, it being for the year 1861.

After saying that "it is gratifying to be able to state that the past year has been one of marked prosperity for the agricultural interests of the Commonwealth," and that "various subjects were assigned to special committees for investigation during the year, with the duty of presenting a report upon each at the regular annual meeting,"—he introduces one from Dr. BARTLETT, from the Midddlesex North Society, on the *Diseases of Vegetation*. Among these the writer speaks of a disease which attacks the bean, and "commences with small brown spots upon the pod, near the back of the pod, and spreading thence toward its front. These spots gradually work their way through to the interior of the pod, the brown color changing to black as it progresses. He says all varieties of beans are liable to the attack of this pest, but some are much more susceptible of its influence than others,—the Sieva, Horticultural and Case Knife being most commonly affected among the pole beans. The remainder of the report is principally occupied upon the recent failure of the fruit crop and suggestions upon the modes of managing apple trees.

The next paper is that of Dr. LORING, upon *Cattle, Breeding and Feeding*. This is a long, interesting and valuable report, illustrated by several excellent portraits of neat stock of various breeds. The writer sustains his positions by extracts from the works of the best authors upon stock, and evinces a deep interest in the topics which he handles so well. Upon the subject of steaming food for cattle, he says he is "satisfied from experience and from the testimony of some f our best practical farmers, that steaming is worthy of careful consideration."

Mr. R. S. FAY made a report on the *Protection of Sheep and Lambs*, from which "it appears that many of the towns have entirely neglected to enforce the 'Dog Law,' while others have been so remiss in their duty as to render it almost inoperative." We hope the Board will institute measures that will compel the authorities in our towns to carry out fully the just and wise provisions of the law.

Mr. GRENNELL, of the Franklin Society, presents a report on the *Wastes of the Farm*, in which he dwells, emphatically, upon the loose, uncertain and unsatisfactory manner in which farming is generally conducted.

Mr. STOCKBRIDGE, from the Hampshire Society, reported upon the subject of *Wheat Culture*. In speaking of the facts which the Committee had collected in the course of its investigations, he says, "they abundantly warrant us in the opinion that wheat can be successfully and profitably cultivated in this State. A little more than a century ago, it was one of the common, ordinary crops. Sufficient was raised for home consumption, and it was an article of export."

The next report is upon the *Cattle Disease*, by Mr. H. H. PETERS, from the Worcester Society. It states that the disease again made its appearance in the town of Quincy, last April, breaking out in two herds nearly simultaneously. Some of these animals were killed, and others were lost sight of.

The Secretary states that constant effort has been made during the past year to enlarge the collection designed to illustrate the natural history and material resources of the Commonwealth. Mr. E. A. SAMUELS, who has made the subject a special study, has an interesting report upon this department.

In the department of *Entomology*, extensive contributions have been made, in addition to the collections made by Mr. FRANCIS G. SANBORN. This gentleman is an occasional contributor to our columns, and is an enthusiast in the profession which he has selected.

Some sixty pages are then occupied by reports from the delegates who attended the exhibitions of the several societies of the State. Then follow extracts from agricultural addresses, essays and reports of committees, which contain many practical suggestions and useful thoughts.

The volume closes with the *Agricultural Statistics of Massachusetts, arranged by Towns and*

Counties. Compiled from the United States Census of 1860, *and other official sources*, under the direction of the State Board of Agriculture. By GEORGE WINGATE CHASE.

From this report it appears that the average value of the farms in the State, including farm implements, and machinery, and live stock, is $3,884,58. We intend to allude to these "Statistics" hereafter.

The volume is beautifully printed, and is a credit to the Board of Agriculture and Secretary under whose care it has been produced, and to the State itself.

For the New England Farmer.

APPLE TREES---MICE.

Some valuable suggestions were given in your last issue in relation to the treatment of trees eaten by mice. Hoping to elicit something further from the same source, I make the following statement and inquiries.

I have an orchard of between three and four hundred apple trees, from twelve to fifteen years growth. My method has been to keep about one-third of this orchard under cultivation at a time. On the part laid down to grass, I have always plowed strips by the trees, increasing them in width as the trees increased in size. Until last year I have planted those strips with beans; manuring in the hill; thus making it necessary to stir the soil about the tree with a hoe. Under this treatment the trees have made a steady growth, and for the most part, maintained a healthy appearance. In 1860, this orchard produced one hundred and fifty barrels of No. 1 Baldwins.

My practice does not accord with the theory of Mr. Varney, as given in the last number of the *Farmer*. I am still so much of an old fogy as to believe in plowing orchards. It should be done, however, by a judicious plowman, with great care not to plow too deep anywhere; especially should it be very shoal about the trees. So far as my observation extends, those are the best orchards, and bear the fairest and best fruit, that are kept under cultivation, provided they are plowed with care. Last spring I plowed strips by the trees as usual, but took no crop from them, leaving the furrows just as the plow left them. I state this that others may guard against a similar course. These furrows furnished a most excellent retreat for the mice; and they availed themselves of it to my great annoyance. So soon as I ascertained the mischief they were doing, I went to work with axes and shovels and removed the ice and snow from nearly every tree in the orchard. I found about seventy more or less eaten; many of them not enough to injure them much; others badly, and quite a number large enough to bear from one to two barrels of apples to a tree, entirely girdled to the wood.

When I had cleared away from the trees, I immediately commenced plastering the wounds with a thick coating of cow manure, put on with a trowel. I then carefully bound them up with woollen cloths. The whole operation of excavating and plastering occupied some days, during which time several trees were seriously injured. Indeed, after we had finished them all completely, so keen was the appetite of these little creatures, that in many instances they gnawed off the strings, and through the woolen cloths and cow manure, making a fresh wound larger than the palm of my hand in a single night; and it was not until I fed them with young sprouts and small limbs sawed from the tree and placed around the trunks, that they stopped their depredations on the tree itself. I have marked those trees that are entirely girdled, and I wish to inquire whether the scions should be put in immediately, or whether I should wait until the bark starts readily from the wood? Can I save, in the way you suggest, such as are eaten quite into the roots? Is a banking of earth or mud placed around the body of the tree in the fall, the easiest, cheapest and best preventive for the future? J. F. FRENCH.

North Hampton, N. H., April, 1862.

REMARKS.—This is a timely and excellent letter. Let us improve by it. Two acres of our orcharding, where the principal mischief has been done by mice, had been in grass two years, and was broken up last fall. After the plowing had been done, every inch of turf left by the plow was reversed, and nothing left on the surface but the clear soil. But the turning over of the soil formed the most complete harbor for mice, as it is impossible to lay every furrow perfectly flat. We shall break up no more grass land in the orchard in autumn.

We think you have pursued precisely the right course in covering the wounds, as if left uncovered, the sap wood is likely to become dry and crack, and the bark itself will lose some of its vitality near the edges of the wound. When the sap has moved so that the bark may be easily separated from the alburnum, then set the scions.

There is no good reason why you cannot save a tree that is gnawed down to the roots, if the connection is properly made.

A banking of earth or sand will, in ordinary cases, prevent mice gnawing trees; but we know of no sure preventive when the earth is covered with a coating of ice. Could not thousands of these pests be destroyed by feeding to them wheat steeped in strychnine? It might be sowed through the orchard late in November, and occasionally through the winter on the snow.

HINT TO HOUSEKEEPERS.—Every housekeeper who uses kerosene or well oil, knows that it affords the best and cheapest light of all illuminating oils; but she also knows that the constant expense and annoyance from the breakage of lamp chimneys almost, if not quite, counterbalances the advantages of its use. One who has thoroughly tried the experiment of preventing chimneys from cracking with the heat of the flame, says:—Put the glass chimney in lukewarm water, heat to the boiling point, and boil one hour, after which leave it in the water till it cools. The suggestion is worth a trial.—*Scientific American.*

PEAS AMONG POTATOES.

Most persons are fond of green peas; but a great many, even among farmers, do not have half as many as their families would use with advantage to their health and good-nature. They are often planted in the garden, on a rather light and dry soil, and after one or two sparing messes have been gathered, the unwelcome intelligence comes to the family, that *there are no more green peas!*

In order to have a succession of this delicious vegetable upon the table, different varieties must be used, and planted at different times, and if the soil is not a moist one, they should be planted deep—say three or four inches—and after they are fairly up an inch or two, mulched with some substance that will check evaporation from the soil directly above them.

For later use there is a better mode than this, viz.,—Put a single pea into the potato hill at the time of planting the latter, over a portion of the field. A week later, go over another portion of the field in the same way, and so on for three or four weeks. In this manner the table may be plentifully supplied with delicious peas as long as they are desired, and at a cost too trifling for consideration.

The potato plant is a protector to the young pea, and when the latter has increased in stature, it still lends its friendly aid by allowing the pea vine to cling to it with its little tendrils, and thus sustains it against storm and wind by its superior vigor and strength.

It is much more pleasant to "pick peas" among the potatoes than when they run up among brush. The objection that it is too far to go to the potato field is not an insuperable one. It is not so much of a trial as it is to go without the peas, especially to those *who are really fond of them!*

For the New England Farmer.

A NOVEL MODE OF PLANTING POTATOES.

DEAR FARMER:—In this remarkable time of our country's trouble, when retrenchment is called for in every possible way, and when much of our laboring population is in the army, it behooves farmers to come in for their share of retrenchment and labor-saving, without reducing the quantity of their products. With this in view I propose to give you the method I adopted in planting potatoes last season, which resulted in complete success.

The ground was a piece of unturned green sward, with a soil of clayey loam. I commenced on one side of the piece and turned a furrow in, then dropped a row of potatoes on the grass close to the edge of the furrow (that was turned over) and turned another furrow against it, completely covering the potatoes, which finished the row. I then turned another furrow, the same as the first, allowing the near horse to go in the last furrow, dropped potatoes and covered as before, and proceeded in like manner until the piece was done. I planted them in drills, with one piece in a place, and about one foot apart.

When I dug them in the fall, I found the potatoes nestled very cosily among the turf, and they turned out very smooth and nice, and produced a bountiful crop. I think this method a great saving of labor, which in these times is a great item, though the saving of labor was not my only object. The uncommon wet weather of last spring prevented my planting in any other way in the early season. J. H. M.

Westford, Vt., 1862.

For the New England Farmer.

HIGHWAYS AND THEIR REPAIRS.

[While watching the operations of a new cast-iron plow, with Mr. MEARS, the conversation between us sometimes fell upon topics not immediately connected with the matter before us, and the engravings and description now presented to the reader are the result of one of those conversations. Mr. Mears' name has long been before the public. He has not only invented and made some of the best plows the world ever saw, but he is a cheerful, genial man, full of the spirit of progression, and always earnestly seeking to do something to promote the interest and happiness of his fellowmen. He speaks, below, in his own quaint manner, and presents in it to the reader a vivid picture of what he is doing with his "rough ashler." Those using this device may give the stone any angle by shortening one of the chains by which it is drawn.]

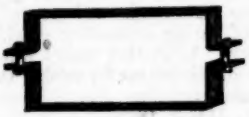
FRIEND BROWN:—While engaged in the trial of the new cast-iron plow, I said that I would renew the conversation on the subject of road and other repairs, then under consideration. Therefore, I will commence by stating that in the month of November most of our country roads are, or should be, in a good form, well drained, smooth and fair travelling condition, when the frost sets in. They remain thus until the frost comes out, and they are cut up by hoof and wheel, when too soft to support the weight passing over and through them—hence the rut, the ridge, the mud and the standing water in the rut, softening the road-bed and rendering it nearly impassable. As travel cannot be kept off the roads, it is well to thoroughly underdrain with stone at the side, or through the centre, by which the underwater will be prevented from rising to the surface, and the surface water can more readily evaporate and run off, leaving the ruts and the ridges, &c., to harden and dry off.

It is to this state of partial dryness that I would call attention; the material is all here that constituted the good road of November, but it has been put out of place! What a change! How shall it be restored to its former position? Some fill the ruts with small stones which are constantly working to the surface. Some, with hoes, level the ridges into the ruts, to be cut out again by the next heavy team. Others go over the road with

an inverted A-shaped scraper, shod with mill saw plate, and drawn by four to six yoke of oxen with men attendant—its operation partial and apochryphal. Still others have we seen, hauling on and spreading a layer of gravel, two loads abreast, four loads to the rod, at a cost of $5 per rod; the ruts remaining as troughs below to hold water to aid the heavy teams in cutting them out again the first wet spell.

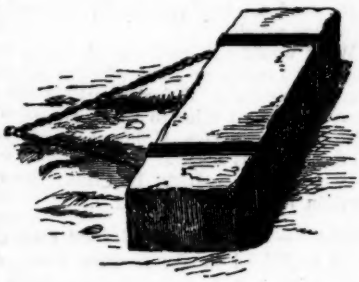
It is easier to pull down than to build up. The thing that is, is that which hath been; and that which shall be, is that that hath already been, and though not new under the sun, I will attempt to describe it.

In the month of April, being desirous of putting the road in order, I applied to a stone-cutter, who split out a rough ashler, 4 ft. 6 in. long, by 18 in. wide and 9 in. deep—cost $2, weight 900 lbs. The smith then made two bands of tile iron, thus,



with bolts to strap the stone—cost, $1.

So much for preparation—now for the *modus operandi*, or way to use it. Well! two yoke of oxen on the timbers or forward wheels of a farm wagon, a draft-chain extending from the transon belt of the axle, back to another chain or bridle hooked into the bolts on the stone, the right arm shortest, to bring the stone at an angle of 45° with the axle and line of ruts. Gee, Buck! Gee, Bright, up! One man to drive, one to tend the stone, one to throw out and remove loose stones, and away we go over the gee ruts to the end of our route! Whoa, boys, whoa! Well! Let's see. The ridges are broken down—the ruts filled up and consolidated by the weight of the stone.



The cobble stones and loose earth are thrown to the centre to fill up the single horse foot path (which had been guttered out) and be removed! Hush, Bright! Haw, Broad, over! And away we go! On the back track of the other ruts—in like manner and effect to the starting-point. Now let us put the 'sider on—for *we* can look back—not having "put our hands to the plow." The face of the road looks as smooth and even as ever. It is solid, too. The trough is filled up and the stones are out of the way. Well, what is the cost? Three men at $1,50 per day=$4,50—two yoke of oxen at $1,50=$3,00, amounting to $7,00. Four miles per day is 320 rods×4=1280 rods; $7,00 or 7000 mills÷1280=5½ mills, or ½ cent per rod. "Time is money! Gather up the fragments, that nothing be lost! Go thou and do likewise, and let others follow your example, and oblige the old Plowmaker JOHN MEARS.

South Abington, 1862.

P. S. Repeated trials with the stone render it advisable to give more weight, which may best be done by having it split out 12 inches instead of 9. Also, to dispense with the bars and draw by ring bolts inserted in the face sides, about 9 inches from the ends, thus:

the wear of the bar is avoided, the draft is not so heavy, and the movement of the stone is more direct and steady. When about to be carried to a distant place, roll it on to a log or cobble stone and sling under the pole and axle. J. M.

SORREL.

This is one of the most troublesome pests, wherever it has once become thoroughly rooted in the soil, with which the husbandman can be annoyed. On clayey soil, however, it soon disappears; but on land of an opposite conformation and texture, its eradication is attended with much difficulty, and, indeed, can only be effected by the most assiduous and persevering efforts. The presence of sorrel in a soil is regarded—but with how much truth we do not know—as an indication of acid, and hence the use of lime, or ashes, is said to be of service in effecting its extermination. By cutting sorrel for several consecutive seasons, just before the seed ripens, or a little earlier, say at the period of general flowering, and applying annually a liberal top-dressing of caustic lime, the growth of the plant will be arrested, and perhaps overcome. This, however, is deemed too expensive by most farmers.

The seed of sorrel is of a nature to remain for many years inhumed in the soil without germinating, unless the conditions essential to its development exist about it. The pericarp, or outer integument, is so indurated that the nicest balance of the stimulating powers of nature are requisite to secure germination, and hence we find old pasture lands, that have not been disturbed for generations, and upon which no sorrel has been seen in the memory of man, will, upon being plowed and exposed to atmospheric influences, become filled with sorrel plants. The same characteristics apply equally to mullein and a variety of other seeds, but perhaps to none in a more remarkable

degree than to sorrel. Where it has taken complete possession of the ground, by mowing it early, before any of the seed has matured, and making it in a grass-cock, with as little exposure as possible to the sun, it furnishes a very good hay for horses and sheep; and in this way it should be appropriated, whenever such a crop is unfortunately produced.

For the New England Farmer.

THE FARMER'S KITCHEN GARDEN.

No part of the farm pays as well as the kitchen garden, if well taken care of. I do not mean by this that every farmer can make money by raising vegetables for market, because that is impracticable, but it is a self-evident fact that the farmer must procure the support of his family from his farm, and a well conducted garden will produce more towards this than any other part of the farm of five times the extent.

The use of vegetables and fruit as a diet is said by medical men to be conducive to health, and as most people, and especially children, are fond of garden fruits, it is policy for every farmer to provide a plentiful supply for home consumption. It would seem that people having all the conveniences that farmers have, as regards land and plenty of leisure time to take care of a garden, would be the ones that would consume the most of such things; but it is a fact that the people of cities and villages use more vegetables than the same number of land-owners. Take a look among the farmers, and you find that one-half of them have no garden at all, or at most, a little corner in the grain field which is overrun with weeds, and as soon as the grain is harvested the cattle are often turned in to destroy what there is! Others have a place set apart for the purpose, but do not get time to do anything in it until all the spring farm work is done, thereby making it too late to secure any of the kinds requiring early planting, and destroying the possibility of getting early vegetables. This is a great loss, when we take into consideration that such things are relished a great deal more in the hot weather of June and July, than later in the summer. What is more aggravating than to know that your neighbor has green peas, new potatoes, string beans, and the like, and your own but just up, and all through your own neglect by not planting in season!

Let me say a few words in behalf of the farmers' wives and daughters, who, during the first two or three months of summer, have to rack their brains to think of something to get for dinner, which the men can eat,—for when they come in from the field, weary with labor, their stomachs are apt to revolt at salt pork and old potatoes! But if there are early potatoes, peas, beans, and other vegetables in the garden, they know just what to get for dinner, and when the workmen come in, they eat with a relish, and nothing does the faithful wife more good than to see her husband eat the victuals she has cooked for him, as if they tasted good.

The garden should be near the house, as housekeepers do not always have time to go far; and if it is close by, a great many leisure moments can be spent in weeding, &c., which could not be done if it were far from the house. The best soil for a garden is either a muck or sandy loam, but as we can not always have the right kind suitably convenient, we must make what we do have, as nearly right as possible. If it be too moist, draining must be resorted to, and such land generally makes good gardens. In fact, the best garden I ever saw was a marsh, thoroughly drained, and well manured to warm it up. The manure for the garden should be well rotted, and if allowed to remain in a vault or cellar through the summer, all seeds would be killed, thus saving a vast amount of work in weeding. Apply the manure in the fall, and plow in immediately, plowing again in the spring, which thoroughly incorporates it with the soil. As soon as the weather will permit, plant some early potatoes, peas, and all kinds of early vegetables, which are not liable to be killed by frost, putting in others along as the season will permit, and when they come up, keep them well hoed and free from weeds, and you will have the satisfaction of having something good, as well as your neighbor. At another time I will, if desirable, give specific directions for raising various garden vegetables. W. H.

New York, March, 1862.

EXTRACTS AND REPLIES.

A ROOT CUTTER—CARROT WEEDER—MANGOLDS AND CARROTS—HORSE WITH A COUGH—POOR FARM, AND NO MONEY OR STOCK.

1. A friend of mine is very desirous of obtaining a root cutter. If you know of any, please say what kind, and whether they will cut large turnips fit for sheep; that is, cut them small enough?

2. Do you know of any tool to cultivate and weed carrots by horse power?

3. Do you know upon any reliable data the relative value of an acre of carrots and the same of mangold wurtzels, and their value for feeding sheep and other stock?

4. Do you know any remedy for a horse which has a severe cough?

5. What would you recommend a man to do who has got a run-down farm, who has no money and very little stock? A few remarks on the subject may be of great value to a poor farmer. Perhaps his Excellency, Gov. Holbrook, would give a little advice on this subject.

JOHN H. CONSTANTINE.

Campton Village, N. H., 1862.

REMARKS.—*Willard's Patent Root Cutter*, figured and explained in the monthly *Farmer* for January, 1859, is just the article you need. It cuts the roots in strips about as long and as wide as a man's forefingers, but not more than *a quarter of an inch thick*. And this strip is broken partly through, several times, so that sheep or lambs have no difficulty in eating them. One bushel of turnips a *minute* may be cut with one. Price $10. Sold by Parker, Gannett & Osgood, Blackstone Street, Boston.

2. We know of no implement precisely adapted to the cultivation of carrots by horse power. *Mann's Vegetable Weeder* might be used with horse, but man power would be better, we think.

3. We do not.

4. *"Horse with a cough."* But little work, a warm stall, with bedding a foot deep, moderate feeding, with moist cut feed, and a little laxative medicine.

5. *"Poor farm—no money—no stock."* A hard case, truly—almost too desperate for any remedy that we can prescribe. There are three ways to be pursued, viz.:

1. To sell land enough from the farm to furnish the means of plowing and manuring one, two or more acres. Plant and tend them perfectly, working for others in the meantime to assist in the family support until the crop is taken off.

2. To get the means of operating by mortgaging the farm, then cultivate thoroughly and economically, and not only make a living, but pay up interest and principal.

3. With the aid of the family, cultivate a kitchen garden, pasture a cow or two, and let the rest of the farm lie idle, while you assist other people on the best terms you can, until enough is accumulated to purchase stock, and keep it.

We know persons who are now independent, who began in each of these ways. Those who mortgage the farm and get a cash capital of four or five hundred dollars to work upon—if they are shrewd calculators—will generally do the best. Our sympathies are warmly with you, brother C., and we regret that we cannot recommend something more easy to accomplish than anything we have suggested.

—

RECEIPTS FOR MAKING COFFEE.

The following receipts for substitutes for pure coffee, which the writer has never seen in print, are worthy of a place in the Ladies' Department of the monthly *Farmer*.

1. Take sweet corn, sound and well ripened, roast and grind it as you would coffee, mix two-thirds of the corn with one-third of good quality pure coffee.

2. Take common barley, wash and free it from all foul seeds, roast, pound or grind it. Mix two parts barley, two parts sweet corn, and one part pure coffee.

In either of the above ways a finely flavored article is produced, superior in the estimation of the writer to the best quality of ground coffee that is usually sold in the market. The addition of a small quantity of prepared Dandelion root or Chiccory is esteemed by many an improvement, imparting to it a higher color and richness of flavor. SUBSCRIBER TO MONTHLY FARMER.

Still River, March 26, 1862.

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SMITH'S PATENT FENCE.

In your issue of Feb. 22, is a description and recommendation of "Smith's improved farm fences, patented Oct. 11, 1859."

From some experience, and also from observation, I can bear testimony to the excellence of that kind of fence. Fences were built in this vicinity on essentially the same plan, several years previous to the date of this patent. Mr. Smith, therefore, cannot claim to be the inventor of anything in reference to it, unless it be the grooving of the posts. Hence, I suppose any one desiring to erect such fence, by dispensing with the grooves in the posts, need not be at the trouble and expense of obtaining permission of Mr. Smith.

South Amherst, 1862. FARMER.

REMARKS.—We know nothing of this matter. Mr. Smith will be able to vindicate his own rights.

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REMEDY FOR SHEEP PULLING WOOL.

I have always regarded the column of "Extracts and Replies" as a very valuable feature of your excellent paper, it seems so familiar and so much like talking the matter over with our neighbors. And I sometimes think that we get and retain more valuable knowledge by these inquiries and short replies than by a more extended and labored essay upon some general topic.

A few weeks since I noticed an article from Mr. Peters, of Bradford, recommending unguentum as a remedy for sheep pulling their wool. I find that this was designed for those cases where sheep pulled their own wool, occasioned probably by itching. I have one or two sheep that pull the wool from others, and eat it, and have sprinkled snuff on the sheep, which I hope will prevent it for a while, but I am afraid that it will not last long. It would be something of a task, and somewhat expensive to apply snuff to a large flock.

Will you, or some of your readers, tell me of something better? S.

Fairlee, Vt., April, 1862.

REMARKS.—We have no knowledge in the matter. Will some one who has, reply?

—

USE OF ASHES.

As the time for composting and using manure will soon be upon us, I wish to ask through your columns a little advice in using ashes. I have a stoned cellar with a roof over it, partly in a side hill, in which I deposit my ashes as taken from the house, where they cannot expose buildings to fire, and are ready for use when required. I deposit there annually about 100 bushels. These ashes are made from a mixture of wood and peat. I wish to ask which is the most judicious method of using them? I have for years past used them by applying a handful to each hill of corn on the surface of the ground, around the stalks at the first hoeing. But I have serious doubts of its being the best way, either for the present crop or for the land. I thought you or your correspondents might give their practice, whether they use as above described, or compost and put in the hill at time of planting, or how they use, and on what soils they are most beneficial. I thought this inquiry might bring out views which would interest others as well as myself. A SUBSCRIBER.

Wayland, 1862.

REMARKS.—Many good farmers think ashes applied to the hill as you describe, is a profitable way to use them. We are inclined to think that if they were composted with fine, meadow muck, and a quart of the compost applied to the hill, and mixed with the soil, the effect would be better.

USE OF HEN MANURE—WARTS—WHEAT FOR HORSES.

I have some hen manure. Can you inform me of the best way of applying it to the ground, and to what crop? If to corn, how should it be prepared?

A neighbor of mine has a steer on one of whose ears is a number of large warts, one being as big as a hen's egg. Can you suggest a remedy?

I lately saw it stated in a book entitled "Cole's Diseases of Animals," that wheat fed to horses would poison them. Now that does not seem reasonable to me. What is your experience in the matter? J. DANA ADAMS.

Williamsburg, Me., 1862.

REMARKS.—Mix the hen manure with muck, loam or sand, four parts of either to one of the manure. Before dropping corn throw a handful of this compost into the hill, and mingle it well with the soil.

See article in this paper on dispersing warts with fresh butter.

Wheat taken in large quantities, will kill a horse —so will corn. But fed judiciously, either is nutritious and wholesome.

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DISSOLVING BONES.

Can you, or some of your correspondents, inform me through the columns of the *Farmer* the shortest and cheapest method of dissolving, pulverizing or grinding bones, or the best and cheapest way in which they can be used on land here in Vermont?

I have a small farm on which my slaughter-house stands and from it I have a great many bones. Now I would like to know how they can be used most advantageously with the least expense. The land is, a part of it, light, sandy soil, and part a sort of mucky or sandy loam. I have some young fruit trees, set out last spring. Can I make these bones useful about the trees? Is Coe's superphosphate of lime anything but bone dissolved and ground? What will a machine for grinding cost? Will some one experienced in bones write on the subject? A SUBSCRIBER.

Burlington, Vt., 1862.

REMARKS.—In our last volume of the monthly *Farmer*, on pages 121, 145 and 401, may be found articles on this subject. In the number for January of this year, page 23, is a mode of reducing bones by placing them on a layer of ashes, in a cask, and so continue them. Coe's superphosphate of lime is nothing but bones and sulphuric acid.

—

A GOOD BARN HOE.

Some one has asked for a hoe to clean out cattle stalls, one that will clean out the corners as well as the manure. Being a blacksmith, and liking convenient tools to work with, I have made several for my neighbors, that give good satisfaction. For the benefit of some of your numerous readers who may like one, I give you the plan. Take a steel shovel blade, one that is worn out or broken will answer, cut off a piece six inches wide, leaving it the whole width of the shovel, and have both edges straight; punch a half inch hole one and one-fourth inches from the edge on the thickest side; draw a shank six inches long and head in a tool. Bend the shank so as to have it stand like a common hoe, put it through the hole and rivet on the blade with four rivets. A good ash handle is the best. Both sides can be used.

Concord, April, 1862. F. E. B.

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BEST CHURN.

I wish you would inform me which kind of churn is best for a dairy of four or five cows. The Air Pressure Churn was recommended as making ten per cent. more butter than any other in the market. Does it sustain its reputation? Will you inform me where one can be obtained, and at what price? THOMAS HASKELL.

West Gloucester, 1862.

REMARKS.—We have been constantly using the Air Pressure Churn, summer and winter, for two years, and never have found any other churn equal to it. Sold by Parker, Gannett & Osgood, Blackstone Street, Boston.

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A GREAT CROP OF RYE.

I saw in your paper of the 15th ult. a notice of a great rye crop, which I think I can beat. This gentleman raised 70 bushels from 3 bushels seed, on 1½ acres of ground.

I had 2 acres of ground, and sowed 4 bushels of seed, and cleared up 112 bushels of rye, as clean as any I ever saw. A SUBSCRIBER.

Bridport, Vt., April, 1862.

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GOATS.

I noticed in the *Farmer* something about goats. Do you, or any of your readers, know where one can be bought? If so, please let me know through the *Farmer*, and what one can be bought for.

Great Falls, N. H., 1862. S. F. A.

REMARKS.—We do not know where a goat can be purchased.

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RINGBONE.

If "Young Farmer" will inform me of his name and residence, I think I can tell him what will cure ringbone. SAMUEL H. WHEELER.

Mason Centre, N. H., 1862.

A PLOWING BEE.

At a recent meeting of the *Concord Farmer's Club*, it was voted to have a *Plowing Bee* in that town at some time during the first half of May. The desire is to bring together as many plow-makers, and plowmen, as may find it convenient to attend, and to test the plows, so as to learn which of them will do the best and most work, with the expenditure of the least amount of power. Another object is to bring farmers together in a social way, and, perhaps, to hold a discussion upon the subject of *plows and plowing*.

The members of the Club will receive those who come from other towns as guests, and extend to

them such attentions and hospitality as will make their visit agreeable.

Notice of the time and place of the trial will be hereafter given by a committee appointed to superintend the business of the occasion. The plan seems to us to be a good one, and cannot fail to establish some important questions which are now unsettled. We hope to see persons at the trial from various sections of the State.

For the New England Farmer.

SAVE YOUR TREES!

FRIEND BROWN:—I see by the papers that great damage has been done the past winter to fruit trees by the mice; now, if taken in season, the most of these can be saved. Take a sucker from the same, or any other tree of the same kind, and flatten the ends on one side, and insert one end under the bark above, and the other below, where the bark is eaten off, the same as in side grafting, that will make a bridge to carry the sap over the wounded part; bind the ends tight with a strong string, then cover with grafting wax or clay; now cover the whole with earth, if near enough the ground; if not, bind up with clay, to protect the wounded part from the sun. It is a good plan to put in a number of these suckers, to to be sure of one or two, and if they all live, so much the better. When these have grown sufficiently strong to support the tree the old body can be cut out if desired, and the others will soon close up. If this is carefully done every tree can be saved. I have some trees that were done in this way a number of years ago; one of which, whose bark was eaten off clean for four feet, two years ago bore four barrels of apples.

ANDREW WELLINGTON.

Winchester, April, 1862.

REMARKS.—Our correspondent is a gentleman of experience in orcharding, and we are glad he confirms the remarks we made last week upon this subject. Since writing that article, we find that the destruction to fruit trees in this State is much more extensive than we then supposed. Scarcely a young orchard has escaped. We find *fifty* trees on our own grounds, many of them *six inches* in diameter, girdled entirely. Others have a strip of bark left an inch in width, or two or three, in some cases. All these trees were visited late last fall, and every spear of grass taken away from them. The ground where most of them stand was plowed last fall, but the plow was followed with the spade, and every inch of the grass left by the plow was turned under by the spade.

We suggest,—in addition to what has been said,—that the scion to be inserted should have a scarf on the upper side two-thirds as long as that on the lower side. Let the upper side run under the bark until it reaches the end of the scarf. Another suggestion is, that scions be used, not "*suckers.*"

For the New England Farmer.

TIME FOR PRUNING.

MR. EDITOR:—In noticing some remarks of yours, and of your correspondent "W.," in the last *Farmer*, I will venture to give some reasons why I consider June pruning preferable to spring—say March or April. It is generally supposed that after the leaves are off in the fall, trees remain idle until they leave out in the spring. It seems to me that is not the case, especially when the ground is not frozen, and it seldom freezes to such a depth that the extreme ends of the roots are not at work in accumulating sap for the next season's operations, and by March or April, if the tree is in healthy condition, the body is full. Now the tree needs the whole of this supply to throw out its next crop of leaves and blossoms, and if a limb is cut off in the spring, some part of the sap will be pretty sure to escape, and thereby injure the tree.

In making the leaves and blossoms, and setting the fruit, this extra supply seems to be exhausted, and the next operation is the making a growth of wood; now prune your trees, and the fruit and growth together with the leaves, will take care of the sap. Still, sometimes, a diseased tree will leak; when that is the case, it is a sure indication of trouble somewhere.

The foregoing, I contend, is the true economy and process of nature in the growth of trees, and to my mind is a good reason why trees to be transplanted should be taken up in the fall and put in cellars, or heeled in, rather than stand in the nursery until April or May, when they are nearly ready to leaf out. The check they receive in transplanting, at such a period, is hardly overcome through the whole season, and the growth is hardly perceptible, if any.

What kind of progress would a nursery man make in digging trees in this country, at this time, when the snow is from 3 to 6 feet deep? Still, there is no frost in the ground, and nature is steadily performing her silent work.

Another good reason why trees should be taken up in the fall and put in the cellar, is, they are safe from being winter-killed, at least for one season.

I suppose pruning is, or ought to be done, in reference to *the tree*, instead of the surrounding crops, and there is a *best time* to do it, as there is a best time to hoe corn or dig potatoes, and the man who insists in hoeing his corn after haying, or digging his potatoes after Thanksgiving, would be considered out of order, to say the least, and any excuse, such as leisure, convenience, or crops, is no offset to the damage that may be done by doing it at the wrong time.

WM. B. HAZELTON.

South Strafford, Vt., April 7, 1862.

REMARKS.—Please write on the subject you speak of in a private note.

DEPTH OF QUIET PEOPLE.—Some men dawn upon you like the Alps. They impress you vaguely at first, just as do the hundred faces you meet in your daily walks. They come across your horizon like floating clouds, and you have to watch a while before you see that they are mountains.

Some men remind you of quiet lakes, places such as you have often happened upon, where the green turf and the field-flower hang over you and are reflected out of the water all day long. Some day or other, you carelessly drop a line into the clear depths, close by the side of the daisies and daffodils, and it goes down, down, down. You lean over and sound deeper, but your line doesn't bring up. What a deep spot that is! you think, and you try another. The reflected daisies seem to smile at you out of the water, the turf looks as green as ever, but there is no shallow spot beneath. You never thought it, but your quiet lake is all around unfathomable. You are none the less impressed from the fact that it is a quiet lake.—*Williams' Quarterly.*

For the New England Farmer.

BAD EFFECTS OF LEAD PIPE.

MR. EDITOR:—Although much has been said and written relative to the poisonous effects of lead pipe, yet I doubt if the majority who are using water conveyed through this material are aware of its injurious effects upon the human system. I have known of repeated instances where members of families have suffered from various ailments, who have only found relief in abstaining from the use of water conveyed through lead. A striking case of this kind was recently made known in this vicinity.

The wife and one or two other members of a family were diseased in a manner that baffled the skill of the medical faculty, far and near—nothing that was done seemed to afford any permanent relief; and, in fact, relief was finally despaired of, but little hopes being entertained of their recovery. At last, however, it was suggested to them that the lead pipe through which the water used by the family was conducted, might be the cause of their ailments. The suggestion was heeded; *pure* water adopted in its stead, and the result was the most surprising. But a few weeks elapsed before a sensible change was manifest in all, and in a few months a complete restoration was effected. And from observation, I have no doubt that many are ignorantly suffering from similar causes. But among those who have given thought to the matter, lead for aqueducts is fast going into disuse. Guttapercha, block-tin, hydraulic cement, &c., all of which are free from the objections urged against lead, are taking the place of it. The use of hydraulic cement for aqueducts is fast taking the place of everything else in many localities, and especially where it has been the most used. It seems to possess essential qualities possessed by no other material, prominent among which is its well known *purity* and *durability*—time only serving to harden and render it more durable—two desirable qualities in an aqueduct; then, again, the expense is but little more than half as much as lead, and it is, beyond question, the cheapest and most durable pipe that can be laid. Several of my neighbors have had some of it laid after the manner of Livermore's patent, and it seems to be all that could be desired. It is taking the place of everything else in this vicinity. Block tin, too, makes a durable as well as pure pipe, but its high cost is objectionable to the man of limited means. I hold it to be the duty of every one who is putting down an aqueduct, to hesitate long before using a material, the poisonous qualities of which will in any manner jeopardize the health of his family. REFORMER.

Winchester, April 3, 1862.

HOW TO PROPAGATE CURRANTS.

In order to raise currant bushes from cuttings so that they may have a clean stem and but one set of roots, and those at the lower end, like seedlings, I take a cutting about ten inches long, and prepare it in the usual way, by cutting off the lower end square. I then cut out the buds or eyes, excepting the three or four uppermost ones, which are reserved to make the top. I then stretch a line, start the cuttings by its side, eight inches apart in the row, their ends one inch in the ground, and mould them up four or five inches in depth, like corn hills when planted in drills. When they become well established by having roots, which will be in mid-summer, level the mould of earth back to its former place. Should any roots have started from the intended stem, clean them off and plant them out at one year old.

The advantage of growing bushes in the above manner is that they will not send up suckers as those do that have been grown by setting the cuttings deep in the ground, and allowing two or more sets of roots to grow.—*Country Gentleman.*

HAY AND CORN SHRINKAGE BY DRYING.—The loss upon hay weighed July 20, when cured enough to put in the barn, and again February 20, has been ascertained to be 27½ per cent. So that hay at $15 a tun in the field is equal to $20 and upward when weighed from the mow in winter. The weight of cobs in a bushel of corn in November ascertained to be 19 lbs., was only 7½ lbs. in May. The cost of grinding a bushel of dry cobs, counting, handling, hauling and miller's charge, is about one cent a pound. Is the meal worth the money?—*Scientific American.*

LADIES' DEPARTMENT.

SORROWS OF CHILDHOOD.

There are parents who deliberately lay themselves out to torment their children. There are two classes of parents who are the most inexorably cruel and malignant: it is hard to say which class excels, but it is certain that both classes exceed all ordinary mortals. One is the utterly blackguard—the parents about whom there is no good nor pretence of good. The other is the wrong-headedly conscientious and religious; probably, after all, there is greater rancor and malice about these last than about any other. These act upon a system of unnatural repression, and systematized weeding out of all enjoyment from life. These are the people whose very crowning act of hatred and malice towards any one is to pray for him, or to threaten to pray for him. These are the people who, if their children complain of their bare and joyless life, say that such complaints indicate a wicked heart, or Satanic possession; and have recourse to further persecution to bring about a happier frame of mind. Yes, the wrong-headed and wrong-hearted religionist is probably

the very worst type of man or woman on whom the sun looks down. And, O! how sad to think of the fashion in which stupid, conceited, malicious blockheads set up their own worst passions as the fruits of the working of the blessed Spirit, and caricature, to the lasting injury of many a young heart, the pure and kindly religion of the Blessed Redeemer! These are the folk who inflict systematic and ingenious torment on their children; and, unhappily, a very contemptible parent can inflict much suffering on a sensitive child.

You may find parents who, having started from a humble origin, have attained to wealth, and who, instead of being glad to think that their children are better off than they themselves were, exhibit a diabolical jealousy of their children. You will find such wretched beings insisting that their children shall go through needless trials and mortifications, because they themselves went through the like. Why, I do not hesitate to say that one of the thoughts which would most powerfully lead a worthy man to value material prosperity would be the thought that his boys would have a fairer and happier start in life than he had, and would be saved the many difficulties on which he still looks back with pain. You will find parents, especially parents of the pharisaical and wrong-headedly religious class, who seem to hold it a sacred duty to make the little things unhappy; who systematically endeavor to render life as bare, ugly and wretched a thing as possible; who never praise their children when they do right, but punish them with great severity when they do wrong; who seem to hate to see their children lively or cheerful in their presence; who thoroughly repel all sympathy or confidence on the part of their children, and then mention as a proof that their children are possessed by the devil, that their children always like to get away from them; who rejoice to cut off any little enjoyment—rigidly carrying into practice the fundamental principle of their creed, which undoubtedly is, that "nobody should ever please himself, neither should anybody ever please anybody else, because in either case he is sure to displease God." No doubt, Mr. Buckle, in his second volume, caricatured and misrepresented the religion of Scotland as a country; but he did not in the least degree caricature or misrepresent the religion of some people in Scotland. The great doctrine underlying all other doctrines, is, that God is spitefully angry to see his creatures happy—and of course the practical lesson follows, that they are following the best example, when they are spitefully angry to see their children happy.

Then a great trouble, always pressing heavily on many a little mind is, that it is overtasked with lessons. You still see here and there idiotic parents striving to make infant phenomena of their children, and recording with much pride how their children could read and write at an unnaturally early age. Such parents are fools; not necessarily malicious fools, but fools beyond question. The great use to which the first six or seven years of life should be given is the laying the foundation of a healthful constitution in body and mind; and the instilling of the first principles of duty and religion which do not need to be taught out of any books. Even if you do not permanently injure the young brain and mind by prematurely overtasking them—even if you do not permanently blight the bodily health and break the mind's cheerful spring, you gain nothing. Your child at fourteen years old is not a bit farther advanced in his education than a child who began his years after him; and the entire result of your stupid driving has been to overcloud some days which should have been the happiest of his life.

I believe that real depression of spirits, usually the sad heritage of after years, is often felt in very early youth. It sometimes comes of the child's belief that he must be very bad, because he is so frequently told that he is so. It sometimes comes of the child's fears, early felt, as to what is to become of him. His parents, possibly, with the good sense and kind feeling which distinguish various parents, have taken pains to drive it into the child, that if his father should die, he will certainly starve, and may very probably have to become a wandering beggar. And these sayings have sunk deep into his little heart. I remember how a friend told me that his constant wonder, when he was twelve or thirteen years old, was this: If life was such a burden already, and so miserable to look back upon, how could he ever bear it when he had grown older?—*The Country Parson.*

Receipt for Light Dumplings.—After making up your bread the second time, take off a sufficient quantity for dumplings, and set it away until about an hour before dinner, then make them up in rolls as you would biscuit; sprinkle a little flour over your pie-board, and put them on it, far enough apart to allow for raising. Have ready a boiler with sufficient boiling water to steam them, place the steamer over it and put in some of the dumplings, so as not to touch each other, (see that the lid is placed on tightly,) and let them remain ten minutes; then remove them and put in others. Send them to table hot, to be eaten with cream and sugar, or butter and molasses.—*Housekeeper.*

French Pancakes.—Take six eggs, separate the yolks from the whites; beat the whites on a dinner plate to a snow; beat four yolks with two tablespoonfulls of sugar, two of flour, and a teacupfull of cream; add a little salt and a very little carbonate of soda; put in the whites of the eggs and mix gently. Put one ounce of butter in a frying-pan; when hot, pour in the whole pancake. Hold the pan a good distance from the fire for fifteen minutes; hold before the fire to brown on the top. Dish on a napkin. Put any kind of preserved fruit over it. Serve hot.

Unmarried Women.—I speculate much on the existence of unmarried and never-to-be-married women, now-a-days; and I have already got to the point of considering that there is no more respectable character on this earth than an unmarried woman, who makes her way through life quietly, perseveringly, without support of husband or brother; and having attained the age of forty-five or upwards, retains in her possession a well regulated mind, a disposition to enjoy simple pleasures, and fortitude to support inevitable pains, sympathy with the sufferings of others, and willingness to relieve want as far as her means extend.—*Charlotte Bronte.*

LEG OF MUTTON ROASTED.

A leg of mutton intended for roasting should be kept longer than for boiling; it should be carefully attended to during the time it is hung up, constantly wiped to prevent any mustiness gathering on the top and below the flap, and in hot weather lightly dusted with flour or pepper to keep off the flies. The kernel in the fat on the thick part of the leg should be taken out by the butcher, for it taints first there; and the bloody part of the neck should also be cut off when first brought in.

Remove the thick skin very carefully; trim off the piece of flank that adheres to the fat, and flatten the fat with a cutlet-beater or chopper; cut off the knuckle, and nick the cramp bone, to allow it to become more plump, as in haunch. Put a little salt and water into the dripping-pan to baste the meat at first; but then use only its own gravy. Serve with jelly.

A leg of mutton is usually roasted whole, but can be divided advantageously for a small family. Cut the knuckle into a good sized joint, and boil it until tender; but put a coarse paste over the lower part of the thick end to keep in the gravy, and roast it; or if the skin be raised gently from the outside of the leg, to about six or seven inches wide, two or three good slices may be cut off for steaks, and the skin then fastened down with skewers.—*Cook Book.*

STEAMED BROWN BREAD.—Take two quarts of sweet skim milk, one tablespoonful of saleratus, one of salt, half a cup of molasses, put in equal quantities of rye and Indian meal until the dough is as stiff as can be conveniently stirred with a spoon, then put it into two two-quart tins. Place sticks across the bottom of the kettle to keep the water from the bread; place one of the tins on these, and the other in a tin steamer on the top of the same kettle, and let it steam three hours. The water should be kept boiling, while the bread is cooking. When done, put it in a warm oven long enough to dry the top of it, not bake it. Yeast can be used instead of saleratus, if any prefer it, but the bread must rise well before putting it in the kettle.

CLEANING DISH COVERS.—Dish covers should always be wiped and polished as soon as they are removed from the table. If this is done while they are warm, it will be but little trouble; but if the steam is allowed to dry on them, you will find much difficulty in getting the tarnish off from the insides. When they are wiped and polished, hang them up in their places immediately.

THE CATTLE MARKETS FOR APRIL.

The following is a summary of the reports for the four weeks ending April 17, 1862:

NUMBER AT MARKET.

	Cattle.	*Sheep.*	*Shotes.*	*Live Fat Hogs.*
March 27	1237	1773	1600	None.
April 2	1281	3454	2200	500
April 10	1021	1939	2000	150
April 17	1235	3338	2500	600
Total	4774	10,504	8300	1250

PRICES.

	Mar. 27.	*Ap'l 2.*	*Ap'l 10.*	*Ap'l 17.*
Beef cattle, ℔ lb	5 @7c	5 @7	5 @7	5 @7
Sheep, wool on, live weight	4½@5½	4½@5½	4½@5½	4½@5½
Sheep, clipped, live weight	3½	3½@3½	3½@3½	3½@3½
Swine, stores, wholesale	3½@6	3½@5½	3½@5½	3½@5
" " retail	4½@7	4 @7	5 @6½	4½@6
Dressed hogs	5 @5½	5 @6	5½@6	5½@6

REMARKS.—It will be noticed that for these four weeks no change is made in the range of prices for beef. The market, to be sure, has been very steady, but not quite so uniform as this might seem to indicate. In the weekly *Farmer* a full column is given to details, by which it will be seen that quality affects the market as well as price, and that the bulk of the sales are sometimes up and sometimes down in the scale of prices, without exceeding either the highest or the lowest figures.

QUARTERLY SUMMARY.

The total number of cattle, sheep, shotes and live fat hogs reported for the first quarter, or the thirteen weeks ending Thursday, March 27th, 1862, with the average number for each week, is as follows:

	Whole No. for 13 weeks.	*Average No. per week.*
Cattle	16,157	1243
Sheep	34,961	2689
Shotes	6,515	601
Live fat hogs	8,850	680

Of the 16,157 cattle at market during the last quarter, 9118 were from the Western States, leaving 7039 as the number from the New England States and northern New York. Of the 34,961 sheep above reported for the quarter, 14,423 were from the West, and 20,538 from New England and the northern part of New York.

It has been found so difficult to decide upon the number of cattle that should be reported as "stores," that no attempt is made at classification. Many oxen, steers and heifers are sold either for beef or for stores, as will best suit customers. During this quarter, there has been a great demand for light beef, and probably considerable less than 100 head ℔ week have escaped the "meat-axe" of the butcher.

☞ In one respect the recent floods in California have had a beneficial effect, to wit, they have developed new mines, and in many instances formed new deposits in the gulches and river beds, long since worked out and abandoned. The San Francisco *Bulletin* thinks the total damage caused by the floods will not exceed three and a quarter millions of dollars.